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ABSTRACT

The LEARNING LINKS project was undertaken to expand opportunities for adult learning in nonformal, noneducational settings. It had the following three broad aims: stimulate student-negotiated learning, stimulate and support informal adult learning, and test the usefulness of microcomputers in an information service for adults. Over a period of 2 years, four LEARNING LINKS centers were established (two in England and one each in Scotland and Ireland). The four centers were all still operational at the end of the development phase in March 1986, and all appeared to be doing well. At the local level, effective collaboration between agencies proved to be central to the centers' success. In some instances, the project provided a catalytic forum for bringing together community groups and statutory and community agencies in a common cause. The experiences in the area of developing a microcomputer information service indicated that microcomputers do indeed have potential for use in LEARNING LINKS-type work, particularly in the areas of data bases, self-assessment and guidance programs, and microcomputer networks. (This report includes thematic papers on the LEARNING LINKS project and procedures for developing similar programs; case studies of the four LEARNING LINKS Centers; six technical reports on the project; and appendixes containing sample flowcharts and printouts from the microcomputer information service, a discussion of the design philosophy and methodology of the course, and the perspectives of the project's software writer regarding development of a LEARNING LINKS-type information service.) (MN)

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ADULT LEARNING BY CHOICE

RESULTS OF THE CET LEARNING LINKS PROJECT

Dorothea Hall
LEARNING LINKS Development Officer

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

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BACKGROUND TO THE LEARNING LINKS PROJECT

Following three earlier phases of CET's Open Learning Systems Programme, which began in 1977 and ended in 1983, Phase 4 of the programme was concerned with ways of helping potential users of education and training to be more sophisticated in their selection of education and training opportunities. The aim was to help clients of education and training to make informed choices about the kind of learning which would best match their needs or circumstances and to help them take the major responsibility for their learning goals.

The programme had two major strands: the Business Analyst project which aimed to help managers of small businesses to identify their training needs and the LEARNING LINKS project which focussed primarily on the learning needs of adults in non-formal educational settings.

LEARNING LINKS and Open Learning

So how does a project on non-formal adult learning in non-educational settings fit into the work carried out by CET? In order to answer this question we need to look at the origin of the thinking behind LEARNING LINKS.

The two negative adjectives, 'non-formal' and 'non-educational' provide substantial clues, since most CET work in Open Learning before 1983 was concerned with influencing and complementing formal provision in educational and work contexts. Much of this work was connected with Further Education and industry, assisting Open Learning Schemes to tackle administrative and curricular barriers to learning.

However, in recent years the principles of open learning have also been explored in other settings. The needs of sixth formers have been investigated by CET's 'Supported Self-Study' project and the potential of public libraries for assisting independent adult learners has been looked at by another CET project, Public Libraries and Adult Independent Learners (PLAILS).

The common feature of all this work is the desire to enable learners of any age to learn in ways which suit them. The learner chooses the framework for learning, selects the content and mode of learning, and decides at what stage in his/her life a particular learning programme is appropriate.

The LEARNING LINKS project shared this thinking and translated it into a community-based context. The primary role of LEARNING LINKS Centres was to assist adults to negotiate their learning agendas and to enable them to implement their chosen framework for learning.

Project Aims

The project had three broad aims:

1) To facilitate student-negotiated learning.
2) To stimulate and support informal adult learning.
3) To test the usefulness of the microcomputer in an information service for adults.

In practice this meant:

- encouraging adults to think why, what and how they might want to learn

- providing information on learning activities, including clubs, classes, groups, home study courses and voluntary work
- bringing together people with common interests by setting up self-help groups and learning exchanges
- developing an interactive self-assessment program which would help adults to identify their learning goals.

How Did We Do It?

Over a period of two years the project set up four LEARNING LINKS Centres, one each in Scotland and Northern Ireland, and two in England.

LEARNING LINKS Centres were set up with an expectation that they would continue to provide a service beyond the CET development phase and, while this could not be guaranteed, it is encouraging to note that all four services were able to continue beyond March 1986.

At local level, effective collaboration between agencies was central to the success of the work of the Centres. In some instances, the project provided a catalytic forum for bringing together agencies in a common cause.

The work of LEARNING LINKS Centres is documented in the Case Studies in Section 2 which describe in detail the development process of each Centre and the service it provided.

Outcomes from the LEARNING LINKS Project

It is difficult to separate project outcomes at local and at national level, since local work informed national outcomes and national development work enabled local services. Lessons learnt on the project and documented here have only been possible because local staff were willing to become engaged in an experimental, national project. While CET staff had considerable influence in shaping the work of the local Centres, these services had to become autonomous by 1986. This meant that they also had to be given considerable freedom to develop their own strategies in order to arrive at solutions which made sense in their local context. Nevertheless, all four Centres contributed much to the process of testing, refining and achieving the CET aims.

In the long term, the contributions made by the LEARNING LINKS developments to future systems for adult learners, through experimental work at local level and by collaborating at national level, may prove to be more significant than the tangible products resulting from the project.

Some of the lessons from this project have already been shared with other national bodies working in related fields. This book is an attempt to share these lessons with a wider audience in the hope that our experience will be of help to others carrying out similar work.

We are most grateful to Dorothea Hall and staff at the four LEARNING LINKS Centres for preparing these reports for CET. We also wish to record our debt to Dorothea Hall for her energetic and enthusiastic commitment to the LEARNING LINKS project. It achieved much in its 2½ years, both for the areas in which LEARNING LINKS Centres were set and for CET's own planning.

John Coffey, Controller CET Open Learning Unit
August 1986

Section 1

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INTRODUCTION TO THEMATIC PAPERS

The CET LEARNING LINKS project was set up to achieve three diverse but inter-related aims as described in the opening chapter of this book. Over a period of two years, work was carried out to find strategies for achieving these aims.

The first two of the Thematic Papers deal specifically with the lessons learnt in relation to two of the aims, ie student-negotiated learning and informal adult learning. Experiences on how the project achieved the third aim are fully discussed in the Technical Reports arising from the project.

The third theme addressed in these papers, networks for adult learning, emerged as an important by-product of the project and therefore deserved to be written up as a separate topic.

The last paper brings together the various aspects of the project's work, by dealing with the kind of questions which might be asked by those interested in setting up similar kinds of services for adults.

The provision of information to adults was central to the concepts underpinning the early design and development of what was then known as the CET Information Centres' Project. Equally, the aim of facilitating student-negotiated learning was a core element of the educational philosophy which led to the initiation of this project. It should be emphasised that, for this work, the provision of information was seen to be subordinate to the aim of enabling adults to negotiate learning activities suited to their learning goals. On the other hand, it is self-evident that, without adequate information, adults would not be able to negotiate successfully since the process would suffer from lack of data on actual and potential learning activities.

This situation presented LEARNING LINKS with considerable philosophical and practical problems. If LEARNING LINKS Centres set out to collect information only in response to real enquiries (with no preconceived ideas as to what these might be), they would be too slow in responding to clients and would be unlikely to have comprehensive information on anything. If, however, centres collected information not directly linked to expressed needs, they could not only waste valuable staff time but might also influence clients' choices by way of the information they held. One only needs to think of the environment of a travel agency to appreciate how information can become the basis for decision making rather than a useful tool for negotiating one's ideal holiday environment, ie at a time and place of one's own choice, with the right kind of facilities to pursue one's personal interests.

The process of negotiation

In LEARNING LINKS terms, the aim of the process of negotiation is to enable adults to gain control over their own learning. Many of the learning experiences of the present adult generation have been controlled by others or by the requirements of the system, eg teachers or parents, the need to achieve so many passes at O Level, etc. Their learning goals have been influenced by such factors as the type of school they attended, job aspirations or lack of these, advice from careers staff and so on. The result is that many adults have become provider-dependent, ie they assume that professional educators have to validate decisions, or they have rejected adult continuing education since they associate it with experiences not of their making nor of their liking.

To involve adults in negotiations about learning therefore requires an appreciation of these factors and an understanding of why someone's perceptions about education are what they are. Staff need skill and sensitivity in helping people to identify their learning goals and to help system-dependent adults to believe in their own judgement in such matters as what and how they wish to learn. They require the ability to make adults aware of their existing skills and knowledge and to value them, even if these have not been acquired through formal teaching. They also have to believe in the value of informal, self-directed learning in order to make it possible for adults to consider it as a valid option.

While it has to be admitted that national and local LEARNING LINKS staff did not necessarily possess all these attributes, they gradually came to recognise the necessity and value of these skills and attitudes. Success or failure in achieving client-centredness in the counselling process could often be related to one or other of the factors listed above.

Staff training addressed a number of these issues by exploring the external and internal barriers which exist for adults. These included practical considerations related to re-entry into education, as well as adults' own perceptions about what is on offer and about themselves as learners. Staff were also introduced to different styles of counselling and the effect of these on clients. Initial training also focussed on adults' reasons for learning and the many different ways in which adults can pursue learning.

In theory, any aspect of learning can be negotiated. In practice, this would be impossible to carry out within any one service since it requires detailed knowledge of all aspects of adult learning. LEARNING LINKS set out to deal with the basic questions and referred clients to other services when the necessary expertise could be found elsewhere. It was decided that the essential questions were: what someone wanted to learn (subject and specific content and at what level); how someone might wish to learn (mode of learning, potential as well as actual); where and when someone would find it convenient to learn (locality, starting date, part-time or full-time, time of day, etc); how much someone would/could pay. All these questions are, of course, related to why someone might be interested in taking up a learning activity in the first place.

The specific brief of LEARNING LINKS staff was to make clients aware of the full range of possible learning opportunities and to show the relevance of informal learning. LEARNING LINKS services on the whole aimed to reach adults who were unlikely to involve themselves in formal educational provision as it was thought that they might find informal learning better suited to their needs. This was certainly true of Portsea but was less easy to implement in a more formal setting such as a Job Centre.

In general terms, most adults associate the process of negotiation with non-educational contexts, such as industrial negotiations, pay negotiations, etc. In such situations, it is quite clear as to who is negotiating with whom, eg trade union officials with management representatives, and what the negotiations are about, eg better pay or shorter working hours for a certain group of workers.

In educational terms, the situation becomes much more complex since negotiation takes place on an individual level, although occasionlly a group of people will speak with a common voice. In addition, given the LEARNING LINKS approach, all aspects of learning, ie not a single feature such as mode of study, are open for negotiation. Also, LEARNING LINKS staff act as mediators and are not part of education management. They, in turn, often become involved in negotiating with education providers on behalf of clients.

The example below, which is a record of an in-service training role-play session, illustrates how LEARNING LINKS staff assisted clients in negotiating their learning agenda.

Dessie presented himself as the unemployed person with no confidence and no skills. He was looking for any kind of learning activity which might get him nearer a job. Allan explored with him training options such as TOPS provision and the Skills Centre but did stress that such training would not always lead to a job at the end. He discussed Dessie's attitudes to himself and to possible work situations. When confronted with a form, Dessie had to admit that he had literacy problems and the interview then focussed on how these could be overcome. Much persuasion was needed to bring Dessie to the point where he would consider attending a literacy class at the Adult Centre. Allan offered to go with him and to introduce him to the person in charge.

Stages of interview:	**Finding out about Dessie's reason for coming to LEARNING LINKS**
	Finding out Dessie's circumstances re jobs
	Introducing training options
	Discovery of literacy problem
	Discussion on the necessity to overcome literacy problem
	Agreement to try literacy classes
	Handout of information on Skills Centre
(off stage)	Walk to Adult Centre.

Given these complexities, it is not surprising that both staff and clients found it more satisfactory to adopt a more pragmatic and practical approach to enable adults to make informed choices about possible (existing and potential) learning activities, once clients had worked through some or all of the basic questions listed above. In other words, staff encouraged clients to explore why, what, how and where they wished to learn and then introduced the range of options available to them. Where clients were not altogether sure of their learning goals, staff were able to use a somewhat different approach by encouraging them to search the LEARNING LINKS databank on one or two defined identifiers, such as place and time, or subject and level, or interest and place.

Information requirements

Whichever approach was adopted, access to information on learning opportunities was a basic requirement for carrying out successful negotiations. The challenge was to find a system which would include information on existing and potential learning opportunities and which would relate the information to the process of negotiation as set out above.

Although it was by no means essential that computer equipment would be used to store information, it certainly seemed desirable to experiment with providing information in computerised form. Details of the design and operation of the LEARNING LINKS database can be found in the Technical Papers. Its significance in the context of student-negotiated learning is in relation to the way information was categorised, the design of the information on screen and in print, and how this information was used in the counselling process.

As was indicated earlier, given the staffing resources, the basic computer equipment and the LEARNING LINKS philosophy, some hard choices had to be made as to what kind of information could and should be held by LEARNING LINKS Centres. The target population was <u>adult returners</u> to learning, the desired outcome <u>non-formal learning</u>.

Certain kinds of information could be eliminated since other services were in the business of operating databanks on these: Higher Education (ECCTIS), short courses in industrial and commercial training (PICKUP), resource materials for Open Tech provision (MARIS), Open Learning in Scotland (SCET), etc. However, since these databanks were not co-ordinated in any way, they could only be regarded as supplementary information sources in a local situation and not be made the basis for planning local information databanks. Nevertheless, LEARNING LINKS Centres were able to access all the databanks mentioned above either on public viewdata or on disc.

It was decided to concentrate on local information, spanning, as far as possible, the whole spectrum of learning activities. Each LEARNING LINKS Centre engaged in extensive information collection before going public. The bias was towards finding out about existing non-formal and informal learning activities. Non-vocational adult education was included, as were vocational courses deemed to be of particular relevance to adult returners. Much of this information was held on the computer with the intention of close monitoring of usage, in order to learn about priorities for information collection in the future.

In addition to this information collected by local staff, CET staff compiled a databank of home-based/distance learning opportunities. This was in line with the adopted policy, namely to hold detailed information on learning activities which could be taken up in the locality of a LEARNING LINKS Centre. This databank, on a separate datadisc, contained details of educational broadcasts for adults, learning packs and course modules provided by Open University Community Education, correspondence and other open learning provision.

For non-local information, staff relied on contacts in other services, both educational and non-educational. Much expertise was acquired by LEARNING LINKS staff in following up enquiries, ranging from support for the disabled to learning opportunities in hypnotherapy.

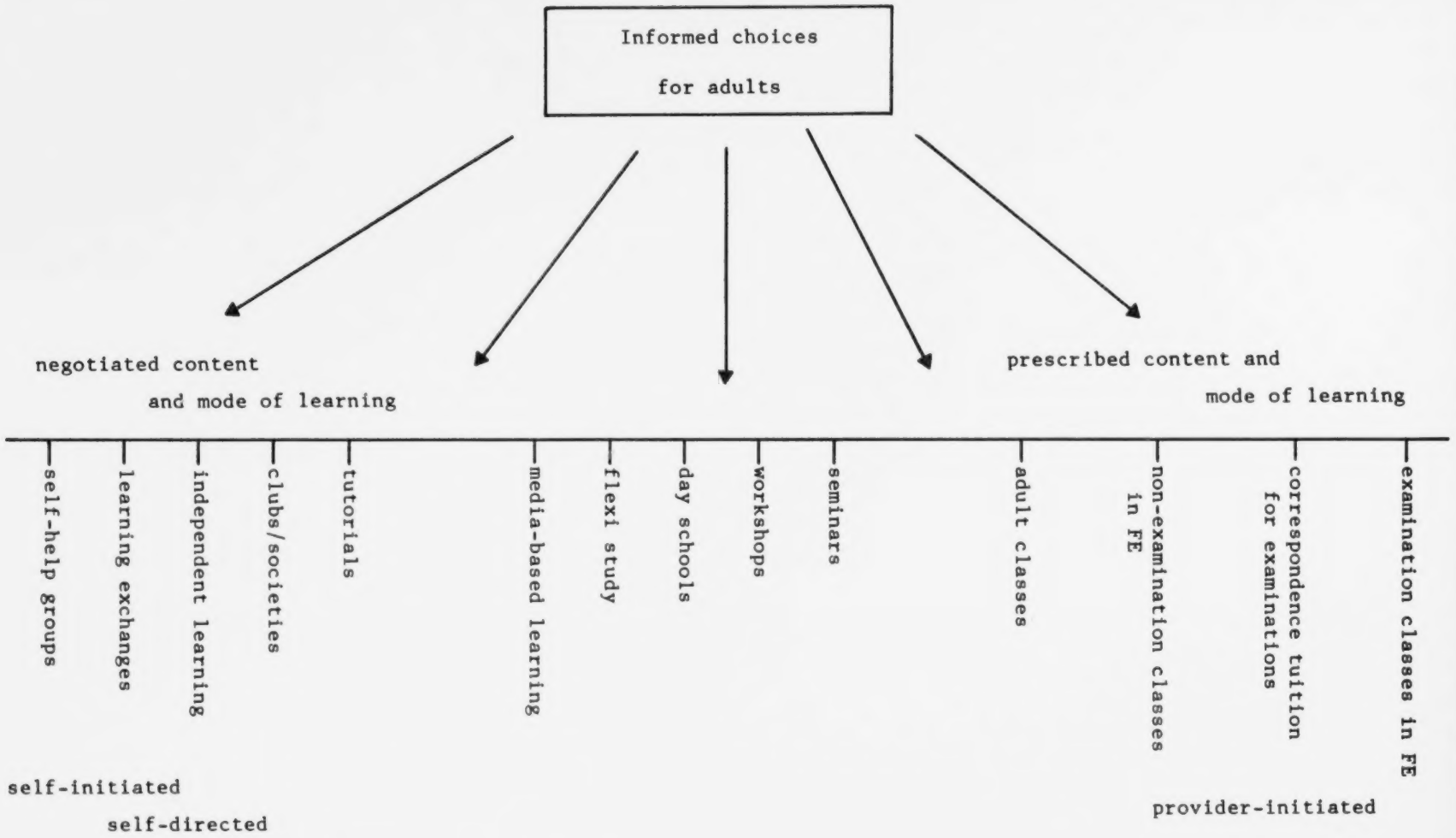
In order to include information on <u>potential</u> learning opportunities in response to requests and to have data for stimulating informal learning activities, such as learning exchanges and groups, the databank was designed in such a way as to be able to hold data on clients' requests for learning and offers to 'teach'. In this way, the databank could make adults aware of the value of learning resources which included their own skills and knowledge. It also encouraged them to think about the possibility of engaging in self-initiated learning.

Information and negotiation

The diagram on the next page illustrates the spectrum of learning opportunities available to adults. It also polarises provision into that which is prescribed both in content and method and that which is controlled by the learner. While it does not include every possible method of adult learning, it does highlight the wide range of choices which confronts learners, particularly in relation to mode of learning.

In order not to influence clients' perceptions about the relative importance of any one aspect of learning, so that the negotiating process could be free from prejudices, it was decided to make it possible to access information by a number of different routes. For example, if the primary consideration for a client was time of study because s/he could only manage Tuesday and Thursday evening, a search could be carried out specifying these parameters. Such a search would include information on home-based learning, on offers/requests locally and on formal and informal learning, unless a client had ruled out any of these as acceptable modes. In practice, the technical limitations of the hardware and software meant that such a search, while perfectly possible, was rather lengthy. Clients were therefore encouraged to specify an interest/subject, as the coding of data related to these. Such searches were much faster, albeit less open in approach.

As mentioned earlier, staff often suggested to clients that they should browse through data in order to help them clarify their own preferences. This was usually done by presenting enquirers with lists of keywords, extracted from the


Informed choices
for adults
negotiated content
and mode of learning
prescribed content and
mode of learning
self-help groups
learning exchanges
independent learning
clubs/societies
tutorials
media-based learning
flexi study
day schools
workshops
seminars
adult classes
non-examination classes
in FE
correspondence tuition
for examinations
examination classes in FE
self-initiated
self-directed
provider-initiated

computerised information, as these would illustrate the many different learning opportunities available to them. The keywords and the full information presented on the screen were found to be useful tools in the process of negotiation and in assisting clients to make informed choices.

The following example records how, in a training role-play situation, a client was encouraged to make use of keywords for browsing and how the computerised data informed the interviewing process.

Jean acted out the diffident, undecided housewife looking for a new lease of life. Her personal interest seemed to be flower arranging but she also showed some interest in fabric printing. She never did make up her mind which it was to be. Moira explored a variety of options, including informal groups such as the newly formed health group. In the end, Jean thought that she might give this a try as long as she could come with a friend. She also took away details of learning options relating to her other interests.

Stages of interview:
- Getting to know the person
- Finding out personal interests
- Looking at keywords
- Looking at possible learning options on computer
- Discussing existing skills of client
- Narrowing options
- Encouraging action
- Take away printout on a range of relevant learning activities.

Criteria for client-centred information provision

While this paper is primarily intended to trace the concepts and inter-relatedness of information for adults and student negotiated learning, it also provides an opportunity to set out in some detail the criteria which have to be applied for computerised information on learning opportunities for adults. The technical requirements are dealt with in a separate paper. Criteria included here relate to the need for the client-centredness of the information itself and to the question of offering clients direct access to electronic databanks, as compared to mediated access which was the case in LEARNING LINKS Centres.

Where direct access to information can be facilitated, ie if the log-on and search procedures are simple enough and access points for information are in 'user-friendly' locations, the following key questions have to be addressed:

- How can adults be made aware of the full range of options?

- How can adults be encouraged to 'negotiate' information by using their own criteria for data retrieval?

- How can data be prepared so that enquirers can use their own natural language rather than be required to adapt to prescribed terms?

- How can adults contribute to the available data, eg by including their own requests (if these have not been met by existing provision) or their own expertise? The former could lead to the setting up of new formal/informal learning activities, the latter might form the basis for learning/skills exchanges.

- How can clients find a sympathetic contact person if they wish to obtain further information or if they wish to act on the information obtained?

Even if information is not accessed independently by clients, the following points should be carefully considered when setting up databanks:

- Language and layout must be chosen so that adults at all levels and stages can relate easily to the information.

- Information must be in sufficient detail to provide enquirers with answers to their questions, be it on how much something costs or whether there are creche facilities.

- We believe the framework used for LEARNING LINKS asked the right questions, both in language and content, but it would benefit from more detail in some of the chosen fields.

- Equality of information is essential, ie information on informal groups, examination classes, ABE and educational broadcasts should be made available alongside each other.

- If, for practical or other reasons, certain kinds of information are not included in a databank, enquirers should be made aware of this and should be pointed to relevant sources of information.

- Databanks should have browsing facilities so that users unsure of what they want can be assisted in identifying which information is likely to be of relevance to them.

The above does not focus on the problems of setting up and maintaining databanks. It is only concerned with the need to preserve some aspects of the negotiation process in relation to electronic data provision. Not all the points are exclusive to computerised information and could equally well apply to printed information. However, computer databanks deserve special attention because of their potential to facilitate individualised, independent access to a much wider range of information than has been possible in the past.

INFORMAL ADULT LEARNING - OPEN LEARNING IN THE COMMUNITY (Paper T2)

The title of this paper carries with it the implication that there is a connection between the two concepts contained in it. While the two halves are connected, they are by no means identical. Community based open learning is only one way, albeit a significant one, in which informal adult learning can take place. We shall, therefore, explore the meaning of informal adult learning before tracing the commonalities between this and open learning.

Informal adult learning

The definition of informal adult learning, which has been adopted by a new national organisation concerned with this form of learning (Networks for Informal Adult Learning, constituted in 1985), is:

> self-directed learning by individuals or groups.

This definition leaves the context and the content of learning totally open but highlights the key element of all informal learning, namely that of self-directedness, ie giving the learner the freedom and the responsibility for devising a learning programme to be carried out on his/her own or in a group situation.

It is important to note that informal adult learning involves a purposeful, organised learning programme and is not merely incidental, unintentional learning. Such learning can be self-initiated or it can take place in response to, and with the help of, others. In its purest form, it will take place in non-educational contexts, although classes provided as a result of requests from voluntary and community groups can also fall into this category. The chart on the next page illustrates the relationship between informal and self-directed learning.

The LEARNING LINKS project identified the following key elements for its working definition of informal adult learning:

> **philosophy**: adults taking the major responsibility for their own learning
> **context**: non-institutional settings
> **mode**: a special interest in self-help groups and exchanges.

These elements provided the focus for experimental work carried out by LEARNING LINKS Centres. One of the project's aims was to find ways of stimulating informal adult learning which would meet the above criteria, within a specified local community. This linked in well with the concept of student-negotiated learning, the overriding aim for the LEARNING LINKS project, which should also be the basis for open learning initiatives in general.

Open learning

Open learning can be found in many contexts. The last two decades have seen rapid developments in a variety of settings and at different levels. The Open University caters for higher degree students and Open Colleges enable adults to take up flexible modes of study as mature students and to gain access to courses which had been inaccessible before. Further Education has incorporated flexi-study and open learning schemes into college provision and the Manpower Services Commission has launched a large-scale scheme aimed at commerce and

Mode of Learning \ Context of Learning	Formal Education and Training (School, FE, HE, Training Centres, etc)	Non-formal Education and Training (non-credit AE, in-house training, etc)	Informal Education and Training (organised learning in non-educational contexts)	Life experience (non-organised learning)
Enrolled attendance class/private tuition	The institutional norm	The adult education norm	Organised courses often laid on for voluntary and community groups	These could be part of someone's total life experience
Enrolled distance/ open learning	Growth area in recent years	Few initiatives, potential growth area	Some initiatives in this area, eg health education and voluntary organisations	
Independent learning self-initiated self-directed	Rare apart from pre-entry study, independent research	Poorly developed. Scope for AE/library co-operation in providing support services	Served by cultural/ sports/community groups, by publishers, libraries, broadcasters, etc	
Experiential learning self-directed but not always self-initiated	All these can provide contexts for experiential learning			Learning through activities associated with work/leisure/ family/community, etc

industry under the auspices of the Open Tech. All these open learning ventures aim to remove administrative and other constraints for potential learners and to offer learning opportunities in flexible ways, be it through telephone tutoring (Open University), computer programs for marking students' work (National Extension College) or by developing independent learning materials (Open Tech), to name but a few examples. LEARNING LINKS extended this thinking into the community context by concentrating on the key elements listed earlier.

An historical view of informal adult learning

It would be misleading to give the impression that these ideas are new to adult education. The format and the tools for achieving more self-directed learning may be new but the core elements are not. The last few decades have seen considerable growth in the facilities to gain degrees, diplomas and other qualifications by distance learning but the independent adult learner is not a new product of our times. Similarly, schemes for organising learning exchanges and community groups may be comparatively recent phenomena but this kind of informal adult learning is as old as the existence of interest groups and mutual aid societies. As recently as 100 years ago, opportunities for adult education depended to a large extent on voluntary groups devising learning agendas for their members. Professionalisation of adult education, a gradual process during the first half of this century which gained considerable momentum in the 1960s, brought about a shift in the way informal adult learning is approached today. It has also resulted in a counter movement which has resulted in a re-emergence of interest in more client-centred provision.

The importance of educational processes which enable adults to take control of their own lives and the significance of self-initiated learning programmes has been recognised by a number of educational writers in recent times. Allan Tough's 'Learning Iceberg' (1) which represents experience-based, self-directed learning as the submerged part of the iceberg, has influenced the way in which adults' total learning experiences are perceived today. He recognises that most adults will carry out a number of learning programmes during their lifetime which take place completely outside the formal education system. Others, like Ivan Illich, advocate the need to de-institutionalise learning and to hand back the choice of content and mode of learning to the learner (2). Paulo Freire argues that social institutions oppress a large number of adults and puts forward reforms which will give back the power to those who are exploited in this way (3). He regards education as a vital instrument for redressing the balance and for empowering people to take charge of their own lives. More recently, Stephen Brookfield drew attention to the need for supporting informal, community-based adult learning. Amongst other things, he suggests sharing resources and other facilities afforded to the formal adult education sector for the benefit of community groups (4).

As already mentioned, interest in informal adult learning re-emerged during the last decade. Parent education schemes such as SCOPE in Hampshire, U3A activities for older citizens and experimental work on different forms of adult provision, such as the Attleborough experiment (5), are just a few examples of work carried out during the past five years. Mutual aid principles are also pursued through such ventures as the Brain Train (learning exchanges and group learning on commuter trains).

LEARNING LINKS and informal adult learning

The LEARNING LINKS project, therefore, was not unique in its focus on informal adult learning, nor was it the only project which developed applications of the new technology for this purpose. Other projects, such as Network at Enfield, were also employing a microcomputer to facilitate informal adult learning. LEARNING LINKS was, however, unique in combining the work of an information service for adults with the aim of facilitating and supporting informal adult learning. As described more fully in Paper T1, it was part of the adopted strategy for LEARNING LINKS to provide information on actual and potential, ie self-directed, learning opportunities. By encouraging adults to consider the possibility of initiating new, self-selected ways of learning, LEARNING LINKS staff became engaged in identifying

- external barriers to learning and
- adults' internal barriers to taking up learning.

This is an important distinction to make as it introduces a new element into approaches to 'Open Learning'. As described above, various open learning schemes have been endeavouring to remove external barriers such as how, when and where learning might be available. They have also started to look at curricular obstacles in order to make learning opportunities more flexible and more learner-centred. The LEARNING LINKS project adopted this 'tradition' but, in addition, it developed interviewing/counselling approaches which assisted potential learners in addressing some of their own personal internal barriers, be they fear of assessment or lack of confidence to offer existing skills for the benefit of other learners. The LEARNING LINKS project also focussed firmly on the curricular issues involved, ie the content of learning for adults.

BARRIERS TO LEARNING

EXTERNAL	INTERNAL
Time	Prejudice
Place	Poor self-image
Cost	Apathy
Organisation	Fear of failure
Language	Fear of assessment
Information	Role conflict
School experience	
Tutors' attitudes	
Qualifications	
Content	
How to study	
Social problems	
Family	

The illustration above lists external and internal barriers to adult learning. By its very nature, informal adult learning removes some of the external barriers, such as organisational and entry requirements. Learning in pairs, self-help groups, workshops and voluntary work make it possible to negotiate time, place, cost and content. Learners are in control of the language level, study method and frequency of meetings.

LEARNING LINKS approaches to informal adult learning

The LEARNING LINKS project was aimed at adults over 21, and preferrably over 25, with no age limit at the other end. It was set up to find ways of reaching adults returning to learning, ie those who had not been involved in a structured learning activity in recent years.

A survey carried out in 1981 by the Advisory Council for Adult Continuing Education found that 78% of adults in the over 25 age group were not participating in continuing education. Since formal provision seems to have few attractions for a large proportion of the population, the LEARNING LINKS project was experimenting with strategies for reaching out to, and working with, people not normally found in the formal adult education sector.

In order to establish contact with as many potential learners as possible, LEARNING LINKS Centres used a two-pronged approach. LEARNING LINKS staff provided a regular service for drop-in clients in non-educational settings (community centre, library, Job Centre, Centre for Unemployed). In addition, LEARNING LINKS staff engaged in outreach activities such as visiting groups, establishing contact with people in the local community, setting up 'stalls' at exhibitions and fairs, and making use of local radio stations.

The first approach led to some new informal learning activities, particularly in the community centre setting, but the second approach proved more fruitful on the whole, especially where LEARNING LINKS staff were able to build on work already in progress, eg a self-help group formed by members of a TOPS course; a group working on a newspaper for the unemployed arising from a collaborative approach between several agencies serving the unemployed; and a sewing circle for women living in the neighbourhood of a community centre. All these arose fairly naturally from work already in progress.

In most cases, however, substantial client follow-up work was required to facilitate new informal provision. Clients' requests or offers for learning exchanges had to be publicised to lead to successful matching, as in the case of two unemployed adults in Derry joining forces for writing comedy scripts or for getting U3A activities off the ground in Portsmouth and Medway. Publicity channels, such as local newsletters and spots on the local radio, were vital to facilitate opportunities for one to one and group learning as well as for voluntary activities. LEARNING LINKS staff assisted adults to gain access to equipment in further and adult education colleges, to enjoy a day on clowning skills and to learn about ways of keeping healthy. Once a group or exchange had been established, new adult members could join these activities.

Barriers to informal adult learning

Experience from this work suggests that, while informal adult learning has proved to be relevant to adult returners, there are a number of difficulties in stimulating this form of learning. In other words, there is another set of barriers to be overcome, some external, most of them internal.

EXTERNAL BARRIERS

External barriers on the whole are easier to tackle than internal ones, although LEARNING LINKS staff did not always succeed in overcoming these despite considerable effort and tenacity. A few examples will illustrate this point.

> A baking group in Derry could not pursue its chosen learning agenda because access to cookers could not be negotiated.
>
> A glass engraving group in Medway was hindered by a lack of (fairly expensive) tools.
>
> A guitar/motor maintenance learning exchange had to stop when one person obtained a full-time job.
>
> Insurance problems for a home-based womens' group wanting to learn DIY skills almost stopped this neighbourhood group from taking place.

These and other practical difficulties, such as access to premises and suitable learning resources, present real problems for those who wish to initiate informal learning activities.

INTERNAL BARRIERS

Other negative influences identified by LEARNING LINKS staff included individuals' perception of themselves (eg low self-esteem and lack of confidence), a reluctance to share skills (especially amongst the unemployed) and adults' preoccupation with learning for instrumental purposes, ie job-related or other directly useful education. These reflect present attitudes to informal adult learning which suffers from low credibility because it is non-accredited learning and suggest a lack of readiness in the adult population to take charge of their own learning.

The sad truth is that, for most adults, learning still equates with education and that means formal structures and formal teaching. In addition, many people still hold on to a compartmentalised view of themselves where education is something that takes place in their youth, where adult life is about work, about supporting a family and making one's mark in the community and where retirement, redundancy and old age are viewed in a negative light. Many adults also have clear demarkation lines between teaching and learning. At present, it is certainly simpler to understand a world in which learners are learners and teachers are trained and paid. Community-based informal learning still remains a pretty nebulous and under-rated concept.

All this does not deny the value of informal adult learning itself but the experience of the LEARNING LINKS project illustrates that those who might (and in some cases do) benefit the most from informal adult learning are the least well equipped to engage in self-directed learning activities. In addition, all Centres found that staff did not only have to tackle the initial barriers described above but that informal adult learning also required good support, especially in its early stages.

Tackling the barriers

Various methods were used to overcome these difficulties. A group facilitators' course, aimed at people already active in the community, eg social workers, was introduced in Medway in order to equip others to stimulate and support informal adult groups. The help of other agencies in the community, eg the WEA, community centres, etc was enlisted to stimulate and provide support for new groups. The role of other agencies in achieving the aims of the LEARNING LINKS project is more fully described in Paper T3. The Derry Centre had the hardest task of all, namely to bring together people with common interests in the face of extreme political divisions.

An interactive self-assessment program was developed to assist adults with identifying their learning goals. Users could, in their own time and at their own pace, work through this computer program which asked them questions about why, how and what they might wish to learn. The program also encouraged them to recognise the skills they already possessed. A printout produced from users' responses, an individualised 'learning self-portrait', could then be used as a basis for finding appropriate forms of learning, including informal learning activities (6).

While the factors listed above present a considerable challenge to those interested in stimulating and supporting informal adult learning, the author believes that the key to enabling growth in self-directed open learning for adults lies in finding ways of unlocking the real potential that adults possess. Unless they recognise the value of the skills and knowledge they already have - acquired by experience or through organised learning - they are not likely to regard informal learning as an appropriate means of achieving their learning goals.

And yet, we cannot neglect an area of learning which has as its basis a respect for people's own choices, which works through and with an existing community, which releases hitherto unexplored resources in people and which is based on collaboration and inter-dependence.

In the author's view, it is important to continue to explore ways of facilitating this type of learning - to cultivate attitudes and to establish environments where people matter more than structures, where learners do not only receive but also give and where they are encouraged to take responsibility for their own decisions. Informal community-based learning activities have an important part to play in ensuring that many more adults are actively involved in shaping their own lives.

Pointers for future work in informal adult learning

The LEARNING LINKS project has identified ingredients which should assist future efforts in this area of work. Prerequisites for stimulating and supporting informal adult education are:

- information on existing informal learning opportunities
- information exchange on potential learning opportunities
- a need for agencies to recognise how they can support informal adult learning in practical ways (access to premises and resources)
- an advice/counselling service for adults

- an understanding of the value of informal adult learning by those working in the community (advice workers, social workers, education staff, etc.)

- 'preparation' of group facilitators

- an induction programme for new groups to assist members with such tasks as identifying expectations, establishing ground rules and planning a learning agenda.

Such direct support for informal adult learning can be made available through a number of different channels. It can involve the education service (eg schools working with parents and services provided by further and adult education), community workers, libraries (especially with regard to premises and learning resources) and the media for information exchange (locally as well as nationally, eg through Broadcasting Support Services).

Conclusions

To achieve the necessary attitude change and to raise awareness of the importance of informal adult learning, a programme of staff development is needed amongst those in a position to contribute to its growth, be it through providing access to information or by assisting new groups. While informal adult learning will not always require such suppport structures - many self-help groups spring up without anyone from outside organising them - there is no doubt that more could be done to facilitate informal learning for those who do not feel able to take the initiative on their own.

The message for educators is to adapt from being providers to becoming facilitators. The formula for involving more adults in learning activities must be to move from standardisation to diversity so that adults can learn to progress from being dependent learners to initiating self-directed forms of learning.

References

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2) Illich, Ivan: Deschooling Society, Harmondsworth: Penguin Books, 1971.

3) Freire, Paulo: Pedagogy of the Oppressed, Harmondsworth: Penguin Books, 1972.

4) Brookfield, Stephen: Adult Learners, Adult Education, and the Community, Open University Press, 1983.

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6) Further details on this program can be found in an FEU Report on project RP242 (FEU late 1986).

THE ROLE OF NETWORKS FOR LEARNING LINKS WORK (Paper T3)

The Council for Educational Technology Information Centres' Project was set up to achieve three aims. The results from the LEARNING LINKS project which relate directly to these aims are described in the first two of these thematic papers and in the technical reports.

There was no expectation that the topic 'networks for adult learning' would become a major theme for this project. However, quite early on, during the development phase concerned with shaping strategies for the work of future LEARNING LINKS Centres, it became apparent that such Centres would only achieve the aims set by CET if they had the active support of other local agencies.

> To provide information on learning opportunities required access to, and co-operation from, all those local agencies engaged in some form of adult education.
>
> To stimulate and support informal adult education was likely to involve other organisations.
>
> To enable student-negotiated learning assumed liaison with those who were in a position to assist students once they had negotiated their own learning agenda.

The CET objectives therefore, by implication rather than by stated aim, involved the use of existing local and national networks. Where such networks did not exist, it became necessary to facilitate them. In other words, networking appeared to be an unavoidable strategy for the LEARNING LINKS project.

Adult education networks

Networks of some sort or another have increasingly caught the imagination and attention of adult educators during the past 10 years. Various models have emerged. Some of these are illustrated and discussed below. Tom Lovett's work in Liverpool highlighted the significance of networks in the mid-70s (1). The findings of a project on non-formal adult education in 1979 are reported in 'Learning Networks and Adult Education' and have attracted much interest from adult education workers (2). More recently, UDACE documents stressed the importance of networks for educational guidance for adults (3). These are but a few examples taken from a much larger repertoire on this topic.

Despite the fact that networks have become a catchword in the 1980s, there is some confusion as to what the term actually means. Some writers refer specifically to the collaboration of individuals, eg S Brookfield on Informal Learning Networks (4), others concentrate on agencies and groups within a network, eg Tom Lovett (5). All agree that networks are beneficial to adult education, although the particular benefits envisaged vary considerably.

Below is an extract from a fuller definition of the word 'network' (6). It describes both the framework for a network as well as its purpose:

> A network is an institutional model or an 'organisational principle' which might be described as consisting of several 'threads' or relationships of communication held together by 'knots', or individuals, who learn from and help one another, while they solve specific problems. Networks are particularly suitable when an objective is not easily

achieved by a single central institution or group or where regional variations mean that differing groups and forms are best suited to meet local needs and circumstances.

The first half of the second sentence reiterates the point made above about the necessity of local networks for the work of LEARNING LINKS Centres, since the CET aims could not be achieved by one agency alone. For the work of the LEARNING LINKS project, the envisaged benefits of collaboration with individuals and agencies in a local situation were thought to include: good information flow, shared resources, shared expertise as well as other support for LEARNING LINKS clients. This was certainly found to be the case and this paper is intended to provide concrete examples from the LEARNING LINKS experience.

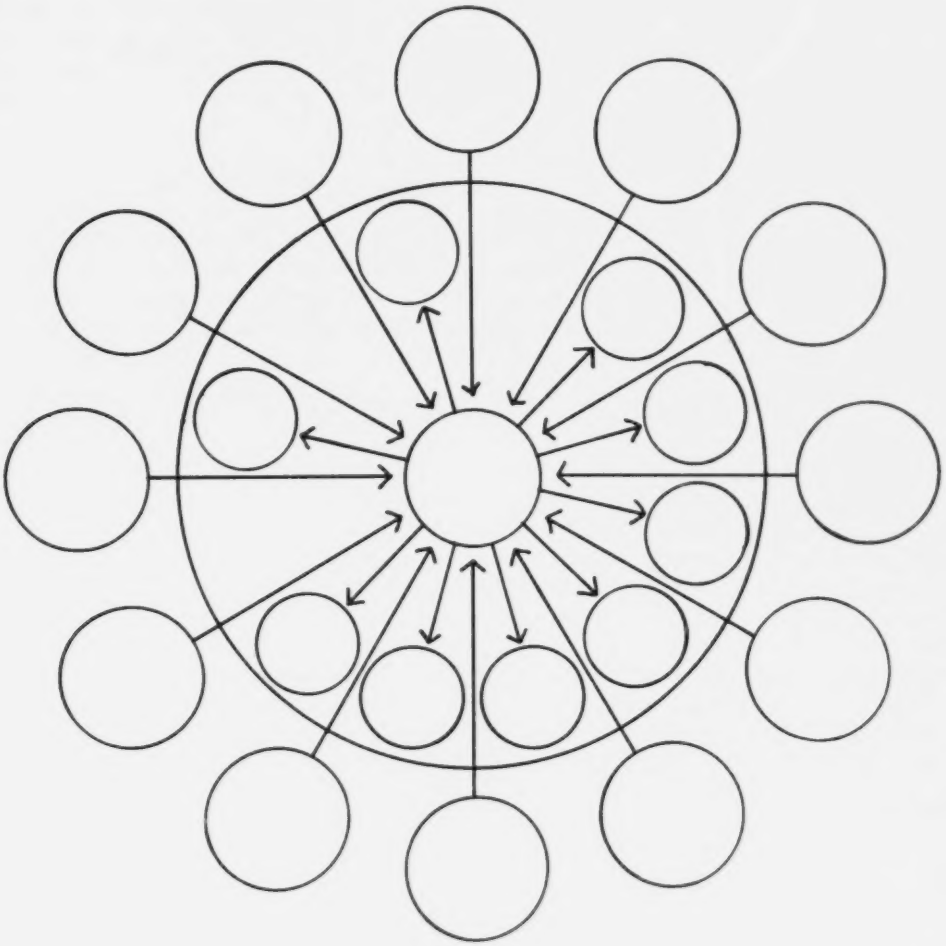
While it was recognised from the very beginning that local networks would be essential to the success of the LEARNING LINKS project, the value of national networks was not fully utilised until half-way through the project. Initially, the LEARNING LINKS project was supported by an ad hoc group consisting of individuals with a variety of expertise and from varied backgrounds. Its purpose was to assist and advise CET staff. Due to the particular nature of the project aims and the specialist help and advice required, it was found that more task-orientated groups were needed. Contacts from national agencies with experience in educational technology, community education and related expertise proved most effective and provided good support during the second year of the project. More incidental support was received from many individuals as well as from national agencies throughout the lifespan of the project. This kind of collaboration was most important to a project concerned with linking individuals and agencies for the benefit of adult learners.

There is, of course, a completely different kind of network, one which also proved useful to the work of the project. This is the computer network, where a computer situated in one office can communicate with another machine hundreds of miles away. While this paper is not directly concerned with this kind of network, it is worth noting that the LEARNING LINKS project made good use of this facility and that all Centres and the CET offices concerned with LEARNING LINKS were electronically linked. More details on this aspect of the project work can be found in the Technical Reports, Paper TR3. There is no doubt that such technical facilities can contribute much to the efficient functioning of human networks and that this application of the new technology deserves more attention and requires further development work.

Frameworks for networks

As indicated earlier, the last decade has produced a number of different models of networks for adult education work. The illustrations below show three different approaches to the concept of a local network, each representing a different model of a 'network hierachy'. The first is based on the graphic model used by Tom Lovett to illustrate the Community Adult Education Network identified from his work in Liverpool. The central circle represents adult education, the inner circle consists of community groups and the outer circle of statutory and voluntary agencies.

Fig. 1



The second model, which is made up of separate layers of circles, was used to represent an informal view of a network. This is based on an illustration used by J Payne (7).

Fig. 2

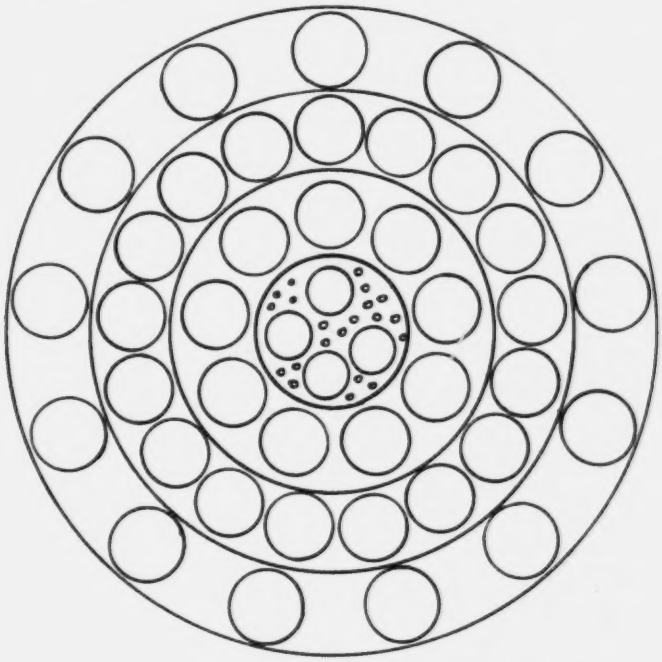
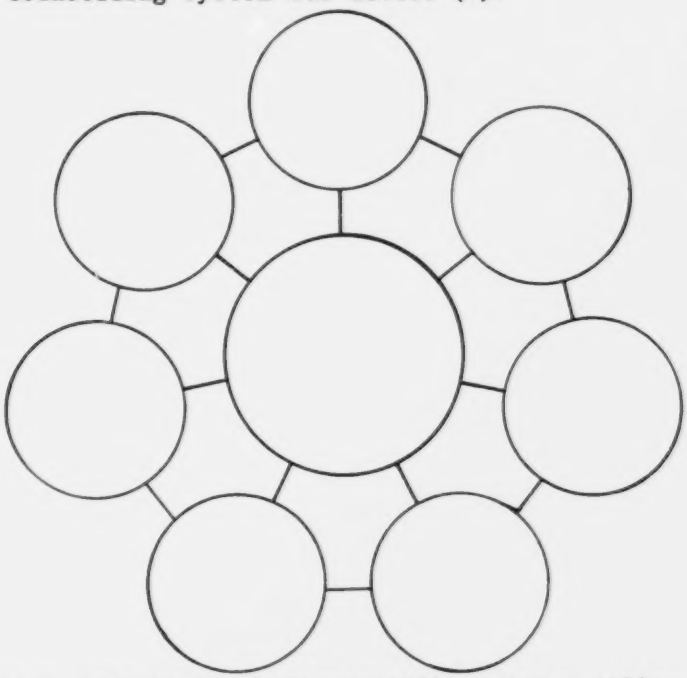


Figure 3 demonstrates the cross-links within a small network. This is based on an illustration used to show the component parts of a vocational, educational and counselling system for adults (8).

Fig. 3



It is interesting to note how each figure illustrates a different kind of hierarchy, as each has a centre. Fig. 2 has a multiple centre, around which the other components are ordered. In a true educational hierarchy, the centre would represent the formal adult education system (as in T Lovett's model). It is interesting to note that, in this respect, Fig. 2 could be described as an

'inverted hierarchy' as the centre is made up of the learners, while the main educational institutions are included in the outer circle.

Each model shows different layers of the network (illustrated by inner and outer rings) and fits individuals and agencies within the network into the appropriate layer. While it could be argued that the many inter-relationships between individuals and agencies will overcome the dividing lines indicated by the circles, it must be recognised that there is a danger of perceiving such networks as spiders' webs, where one agency is 'the king of the castle', be it an educational provider or a guidance unit.

Some of this thinking was explored in an earlier CET project concerned with the regional co-ordination of educational technology (9). This work came to the conclusion that co-ordination within a region (across LEAs) would best be achieved by having a liaison officer. This project recognised the existence and the potential benefit of the co-existence of formal and informal structures. It also pointed to the fine balance which has to be achieved in providing too much/too little support. While this work was concerned with inter-county arrangements, some of the questions it raised can be translated into more local situations.

The LEARNING LINKS network

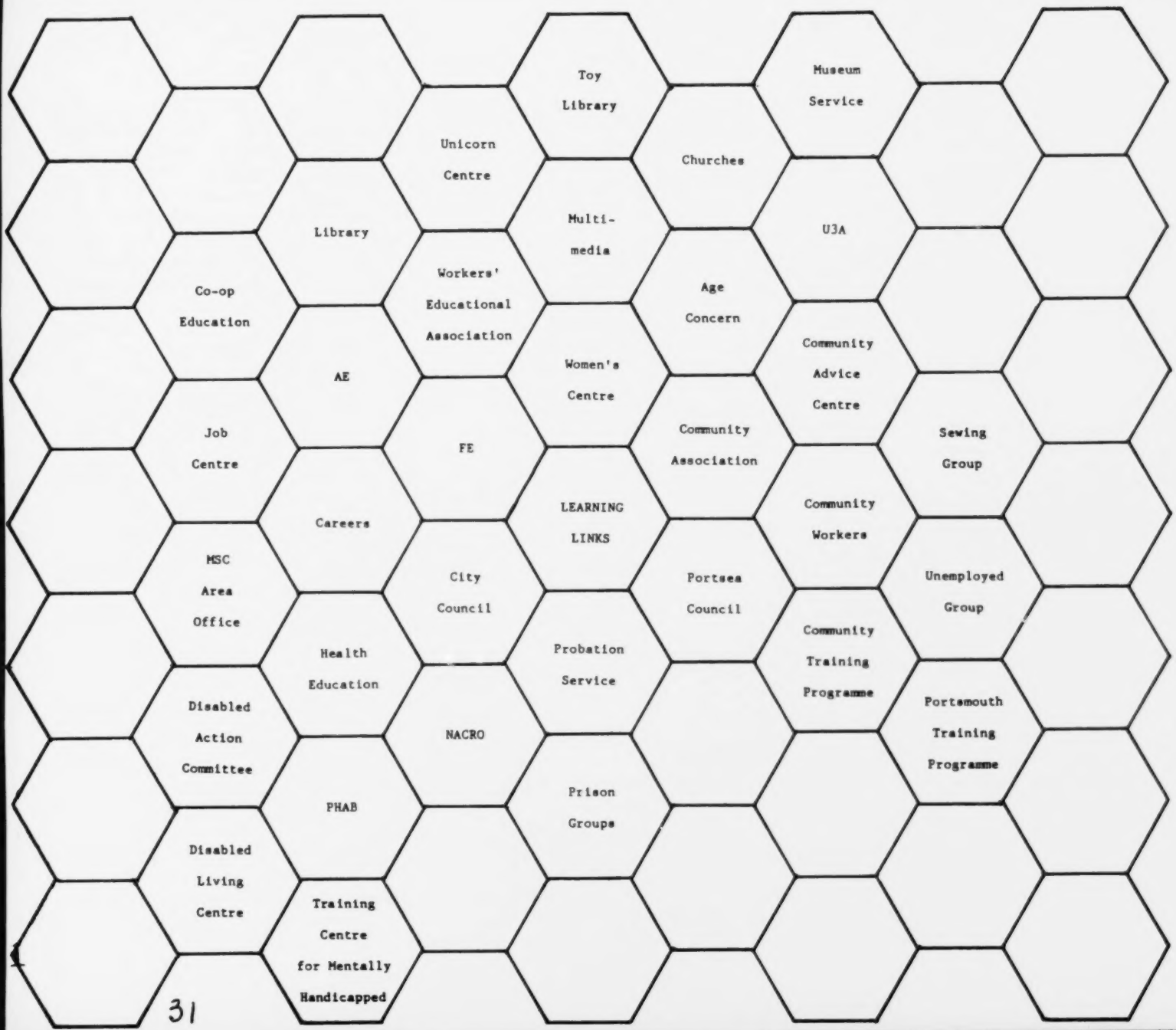
The LEARNING LINKS experience with networks leads to the belief that the models above cannot be applied to LEARNING LINKS services. To conceive local networks as ordered layers or as a hierarchical structure could create too rigid a framework, albeit a theoretical one, for the type of work undertaken by LEARNING LINKS services. The problem of representing networks graphically is that one has to illustrate networks within networks. The pattern of communication between agencies and individuals is very complex and, depending on the task in hand, will vary from one situation to the next. The illustration on the next page is an attempt to show 1) the equal importance of agencies within a network and 2) the inter-relationship between educational, community and other networks. Since a LEARNING LINKS Centre would require access to different kinds of networks, it is situated fairly centrally within the wider network. However, this does not give it a special place. It seems essential to concentrate on the organic nature of networks by highlighting the interdependence of component parts, rather than focussing on mechanistic frameworks which could lead to standardised and inflexible approaches to networking.

Networks and LEARNING LINKS Centres

The illustration on the next page is based on the Portsmouth network. The LEARNING LINKS Centre in this city was able to make use of an existing network. It also created its own links with local agencies so extending the local web.

The other LEARNING LINKS Centres also became involved in networking, by contacting local organisations as well as being contacted by them. In Stornoway, this took off fairly quickly, partly due to the active participation of members of the LEARNING LINKS Steering Group, also in part due to the characteristics of the local community where a key contact within one organisation might also have close links with other activities in the islands.

To establish a supportive network in the Medway towns proved a major task for LEARNING LINKS staff. While it was relatively easy to make contact with key



REGIONAL/NATIONAL NETWORK

CONTACTS such as:

Hampshire C C
Further Education

SEICA

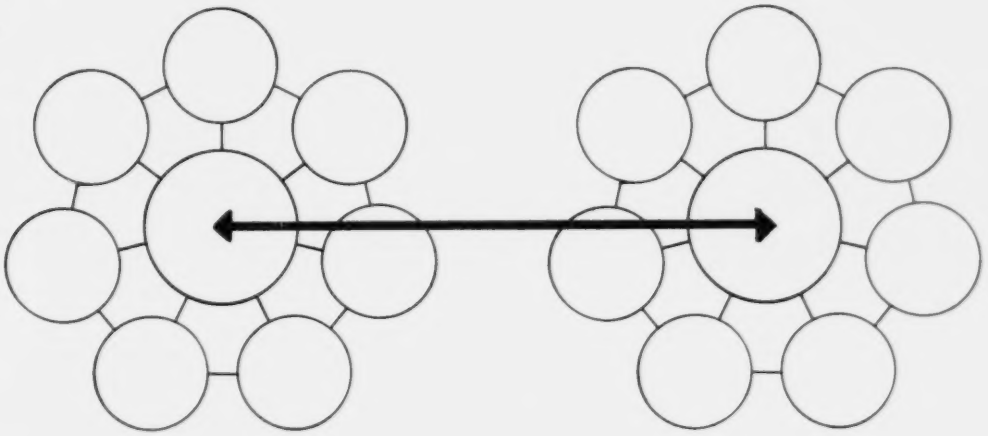
Derry LEARNING LINKS Centre

NAEGS

persons in agencies, it took a long time to forge cross-links between organisations. The fact that a conference on 'Networks for the Unemployed' was being planned through a collaborative effort involving a number of local agencies working with the unemployed provides evidence that a more organic network was operating by the beginning of 1986, although there was still much work to be done to ensure benefits in the long term for the local community.

It is difficult to judge why such a network could not be successfully established in Derry, despite considerable efforts by LEARNING LINKS staff. From the beginning, this project had an inter-agency management group. Staff also had good contacts with a number of educational bodies. There appeared to be a few separate networks in operation in the city, for educational and recreational activities, but it proved difficult to become accepted by these separate networks. It also seemed virtually impossible to create active cross-links. One explanation could be that each individual network is of the spiders' web type and that links therefore have to be forged from one centre to the next, while links across the other component parts may not be firm enough in the long term.

Fig. 4



However, there may be other explanations as to why this aspect of the work did not succeed in the same way as in the other centres. The social and political divide of the population in Northern Ireland, especially among the local community in Derry, is obviously a major factor in hindering efforts of collaboration.

Positive and negative factors influencing networking

The shared experience of LEARNING LINKS staff identified a number of key elements which act as blockages to establishing networks:

- localities which have a strong identity and want to remain separate
- widely dispersed population
- different parts of the education system which do not (and do not wish to) talk to each other
- rivalries, jealousies and suspicion between different organisations
- organisations which become exclusive and possessive of their sphere of work

- lack of inter-agency support at local level

- political problems (both local and national politics).

Positive lessons which emerged from networking activities included the following:

- the need to start small

- the importance of making use of people within existing networks

- the significance of groups of people who have a history of working together

- dense population where people meet informally

- the advantage of LEARNING LINKS staff having a cross-agency function (eg Further Education College/Community Centre or Adult Education/Job Centre) which gives them the ability to co-ordinate between different groups.

The LEARNING LINKS experience of working with networks

In practical terms, LEARNING LINKS staff regarded local networks as a resource for staff and clients. They described such networks as a combination of many partnerships between workers and agencies. The following extracts from local reports (provided by LEARNING LINKS staff for CET) will illustrate how these partnerships became an essential ingredient of the work of LEARNING LINKS Centres.

Local links helped to establish LEARNING LINKS services in their locality as the following extracts illustrate.

October 1984 (Portsmouth)

* We made connections with local groups within the area and we owe a special thank you to Chris from the Community Advice Centre in Portsea. Patsy from Portsmouth Training Programme has also given us invaluable assistance and has enabled us to link into the Community Workers network.

* Mary went to a training day organised by Peter and was able to meet many local community workers and volunteers. We are going to a meeting of the MSC Community Workers on 23rd October and have been invited to the Community Workers' lunch to tell them about LEARNING LINKS. The minutes of this meeting are circulated to 90 organisations. We have also contacted the Health Education Association who similarly will circulate us in their newsletter and put us on their mailing list.

* Our opening is on Wednesday, 31st October. We are inviting small groups to the Centre during the morning and afternoon and we are also having an informal lunch for the college staff, community workers, volunteers, officers from the Civic Centre, WEA and a disabled group.

* We are taking LEARNING LINKS to a Rainbow Fair on 3rd November. The Fair, which is being held at the Community Arts Drama Centre, The Hornpipe, is a new idea which it is hoped will become an annual

occasion for linking voluntary groups who are concerned with the community and environment.

The Stornoway Centre was able to involve representatives from local organisations in the early stages of its service:

December 1985

* Members of the Steering Committee, which met for the first time in September, have been visiting the library for demonstrations of what LEARNING LINKS involves and to discuss their involvement in future developments. Members of other local bodies have also been given demonstrations. This has proved a fruitful exercise.

Initial and subsequent efforts of collaborating with local agencies in Derry can be traced from the following extracts.

February 1985

* On Wednesday, 13th February, we were invited to Pilot's Row Community Centre in the heart of the city. Over the next month we are scheduled to attend at the Family Centre, Gobnascale; Dove House in the Bogside (twice); and the NIACRO office in Bishop Street.

May 1985

* In the first week of May, we participated in the "C'mere There's More" exhibition in the Guildhall, Derry. Approximately fifty local voluntary groups took part. We were able to introduce ourselves to representatives from other local groups and agencies. I have already been to see groups such as: Derry Peace and Reconciliation Group, Columba House Society, World Development Group, NIACRO, Family Planning Association, Waterside Gingerbread Group, Glenbrook Day Centre.

June 1985

* Recently we met with Paul, the local officer of Age Concern. He is coming to visit us soon to explore ways of using the service to the benefit of local senior citizens.

November 1985

* Dessie has made initial contact with Gary of Radio Foyle and Gregory of Magee who is shortly to assume the position of Amenities Officer with the local council and who should prove to be a valuable contact. John of Dove House has been in touch and expressed an interest in establishing a liaison network for Irish tutors and learners to deal with common problems. Dessie has also visited the Northlands Centre and the Whytehouse Centre in the Waterside which may provide an especially sound base for informal learning among the elderly.

Over a slightly longer period of time, networking activities in the Medway towns resulted in the planning of a newspaper for the unemployed (AIM) and a local conference on networking. There was no recognisable network across the towns at the beginning of the project's work (early summer of 1984).

November 1984

* Through my talk in early November to Medway Towns Young Unemployed Project, a number of useful contacts have been made: APEX Trust, Church organisations, etc.

* Malcolm, manager of the Medway Towns Young Unemployed, has been extremely helpful and given me details of a thriving U3A project in Paignton, Devon and surrounding area.

* We have contacted social and community workers, CAB, Samaritans, etc. Andrew of Threshold is keen to use our service and has linked me to a variety of local volunteer and paid worker support.

May 1985

* The network seems to be strengthening now, with local agencies phoning to keep us in contact with any new developments and providing us with support. In return, we co-operate by publicising their service, drumming up volunteer help and so on. We are linking with the Community Help and Information Bus, which visits outlying areas.

June 1985

* The project has found the network very useful over the recent weeks. There is a feeling of mutual support developing and materials/ resources are beginning to be shared. I regularly pass useful information on to other projects which I am told they are using.

September 1985

* Our strongest contact is with the APEX Trust and the Housing Group and through one of their workers, with the Medway Area Arts Council Council interested particularly in Art for unemployed people. We have recently become involved with the Medway Area Arts Council.

October 1985

* We recently shared our resources with another project. Also, the paper AIM is a product of various agencies working together fruitfully and should be published soon. There is still a long way to go. There appears to be reticence regarding regular network meetings (time consuming) and a feeling that such meetings must have clear aims and a purpose each time.

December 1985

* I am meeting this week with Careers, Social Services and MTYUP, to discuss the proposed Medway Network Meeting in April.

* Bill recently attended the meeting for the proposed Council for Voluntary Service. This group, when formed, will apparently involve statutory and voluntary representatives.

The Portsmouth Centre was able to benefit from existing network links. LEARNING LINKS staff nevertheless also forged many new links. LEARNING LINKS clients quite obviously profited from this local collaboration, as is illustrated in the following extracts.

December 1984

* The TSD Prep (TOPS) course was introduced to the women's group and Mary set up a meeting with the very active unemployed group. Several of them also came and looked at the computer. Those who didn't made appointments and have come to see us since. The outcome has been that they have fixed a date for a first self-help group meeting and several are joining a sewing class with the women's group at John Pounds.

January 1985

* We are in contact with the newly appointed WEA Unemployment Support Project Worker and we are discussing the provision of courses for women which links into our work with the Women's Centre.

February 1985

* The LEARNING LINKS newsletter also brought a response from a volunteer who wanted some tuition in computers and was eager to help out with the physically handicapped in return for joining the class free. She has now become an invaluable helper to the Multi-Media Group.

* Sarah, who was one of our clients from the Multi-Media group, has joined the sewing group at John Pounds which started this month in response to demand from the Women's Group and three people from us.

July 1985

* Outreach work resulted in the initiation of three student-directed, self-help projects as diverse as:

    1) A sewing circle for Portsea women
    2) An MSC course - Joblink self-help group
    3) A University of the Third Age group for retired people.

  This outreach work also produced courses, through our facility to record on the databank unmet learning needs:

    1) A computer course for disabled adults through the Adult Education Service
    2) An opportunity for adults to learn the art of clowning at the Hornpipe Arts Centre. A demonstration that learning can be FUN.

  The negotiation of the computer course extended still further our growing network of contacts to include the Portsmouth Council of Community Service, with its own wide range of affiliated organisations. We were linked to the Disabled Living Centre, Active, The Disabled Action Committee and many other organisations through this contact.

* It was largely through our networking contacts and introductions that 42 people were able to attend a seminar organised by Portsmouth College Open Learning Unit on 'Keeping the Mind Alert'.

* Members of our extensive network often combine to provide learning opportunities or help in the development of a project. LEARNING LINKS has received network support and, in turn, has co-operated with

organisations such as the Portsmouth College, WEA, Adult Education Institute, Co-operative Education and others to provide learning initiatives in Portsmouth.

November 1985

* Jil arranged a visit from another group from the Dundas Lane Training Centre for mentally handicapped adults. We have been able to involve some more trainees in the supportive Community Education Programme at the John Pounds. Simon has put us in contact with some of the women in Prison Groups and we are helping some of them re-engage in learning opportunities and gain new skills.

Conclusion

Networks can provide considerable support for adult learners and agencies serving this target group, both at local level and through national links. The main benefits for the LEARNING LINKS project were assistance with information collection and dissemination, cross-referral of clients and direct involvement in stimulating and supporting informal adult learning. Some valuable lessons have been learnt on how to establish and maintain local networks. Longer term work in this area would undoubtedly benefit initiatives in informal adult learning.

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SETTING UP SERVICES OF THE LEARNING LINKS TYPE (Paper T4)

Preface

A more effective way of communicating the content of this paper would be to present interested individuals or potential developing agencies with an interactive computer program which enables them to select only those items from a LEARNING LINKS development menu which are of interest to them, rather than confronting them with the whole of this paper.

The LEARNING LINKS project experimented with several approaches to setting up and operating LEARNING LINKS services. It also adopted a number of different strategies for achieving the CET aims. Potential developers may wish to choose only a small selection from the LEARNING LINKS menu which relates to their particular situation and which would aid them in achieving their aims.

The top menu of the program, presented after some introductory screens, might look something like this:

> **LEARNING LINKS Development Menu**
>
> Please indicate which questions you wish to ask about setting up a LEARNING LINKS type service:
>
> - What does a LEARNING LINKS service do?
> - What is the role of information technology in a LEARNING LINKS service?
> - Who can set up a LEARNING LINKS service?
> - What are the management and staffing requirements?
> - What resources are needed?
> - What staff training is required?
> - What is involved in the day-to-day operation of a LEARNING LINKS service?

Users could further refine their selection as the program progressed. A more ambitious program could also include an analysis of users' responses, thus enabling potential developers to identify for themselves whether their particular circumstances are likely to provide a good starting point for offering a LEARNING LINKS service.

In the absence of such a facility, we shall proceed by using a 'supermarket' approach, ie by presenting the ingredients of the LEARNING LINKS menu but leaving the selection of relevant items to the reader. It should be emphasised that the different aspects of the work of LEARNING LINKS Centres, while interrelated, can be regarded as separate modules.

During the CET LEARNING LINKS project, the aim was to test a number of different strategies. A LEARNING LINKS type service can be set up by only concentrating on one or two of these, eg facilitating learning exchanges and/or informal learning groups, either by dealing with clients in one location or by engaging in outreach work. Other aspects of the work can also be broken down.

Whichever approach is used, it is essential not to lose sight of the central ingredient of the work:

> To enable learners to become self-directed and to take the major responsibility for their own learning.

What does a LEARNING LINKS service do?

LEARNING LINKS services aim to:

- provide facilities to assist adult learners to make informed choices about participating in learning activities. These include applications of information technology
- provide information on learning activities (this can involve a great deal of information collection)
- provide staff (or volunteers) willing to offer informal counselling to assist clients to negotiate their learning agenda
- encourage adults to think about informal adult learning as a relevant mode of learning for their needs
- set up learning exchanges and groups: for this purpose they record offers and requests from clients and match up learners with common interests
- engage in outreach work by visiting groups and organisations in order to reach adults who otherwise may not be in touch with a LEARNING LINKS service
- become involved in the local network of agencies which might be able to assist adult learners
- assist adults by taking on an advocacy role where necessary, eg by making educational providers aware of facilities required by LEARNING LINKS clients.

As already mentioned, the above list serves to enable a 'mix and match' approach.

For instance, it would be perfectly feasible to concentrate on the first item only, although this might well require serious consideration of the second. A LEARNING LINKS type service could install the LEARNING LINKS self-assessment program. However, clients might then approach staff for assistance with finding information on their identified requirements.

Alternatively, an agency might decide to facilitate learning exchanges, by using a board or by computerising the information. This is likely to involve some contacting of other agencies, be it for use of premises or other resources.

Similarly, an organisation such as a CAB may already hold a considerable amount of information on adult education. In order to achieve the LEARNING LINKS aim, it would have to ensure that informal learning is included in its databank (on paper or on a computer) and that staff are aware of the many different learning facilities open to adults so that clients can make informed choices relating to their particular learning goals.

While potential developers do not have to take on all the above roles of a LEARNING LINKS service, they need to consider carefully how they can make satisfactory arrangements to deal with the information, guidance and facilitating roles likely to be involved in the work. They could begin by identifying existing skills and knowledge within their organisation and then consider which complementary activities would be suitable in their situation.

What is the role of information technology for LEARNING LINKS type work?

Two main applications were developed by the CET LEARNING LINKS project: a database and an interactive self-assessment program. Staff also used the new technology to produce contact lists, newsletters and other printed materials for clients (see the Technical Reports).

While it is not essential to use a computer for a LEARNING LINKS service, there are a number of advantages in doing so. Large amounts of data can be held and, given a user-friendly program, can be accessed by clients themselves. This puts into practice the notion of clients being self-directed and enables them to make informed choices, especially if the system is flexible enough to offer user-centred access to information, eg by accepting the user's own language. In addition, updating of data is much easier. However, the setting up of such databanks is very labour intensive.

The interactive self-assessment program provides an alternative to face-to-face counselling. It also incorporates a number of advantages for clients.

Adults can use the program as and when they choose, rather than fitting in with someone's diary; they are not required to disclose their choices or questions to anyone else; and they are able to interact with a system which does not engage them in the complexities of human interaction. This is not to say that access to people is not required at all but it does introduce a different kind of facility for adults wishing to think about learning.

Who can set up a LEARNING LINKS service?

Hosts for LEARNING LINKS services can be agencies in touch with the public and with an interest in assisting adult learners. Apart from these two basic prerequisites, hosts should also be able to offer some space where adults can enquire, or use a computer program, in private. Staff within the host agency should be willing to undertake initial and ongoing training required for the service and should be able to adjust their work commitment to accommodate demands arising from a LEARNING LINKS service.

The LEARNING LINKS project used four different types of agencies:

- a Job Centre where LEARNING LINKS was given a corner to work alongside Job Centre staff

- a Community Centre where a small room was allocated for the work

- a Centre for Unemployed where the LEARNING LINKS service operated from a small room opposite the main lounge

- a Library where the LEARNING LINKS equipment was set up behind the enquiry desk.

Other possible agencies might include community schools used by adults, volunteer bureaux, local advice centres including CABs, health clinics, careers offices and other local centres used by adults. Indeed, there is no reason why some aspects of a LEARNING LINKS service cannot be incorporated into other public services, eg a computer terminal in the Post Office or the DHSS offices. However, these facilities are most likely to be used in places where adults feel welcome to linger, eg in a library, and where there is a degree of privacy.

Although an interest in assisting adult learners may be sufficient as a starting point for developing a service, agencies which in some way are already in the business of dealing with adult clients and which already assist adults to gain access to information may find it easier to engage in this work.

What are the management and staffing requirements?

a) Management

Ideally, the management of a LEARNING LINKS service should be subsumed into existing management arrangements for the work of the host agency. This could be a statutory body, such as a library, or a voluntary group as was the case for the Portsmouth LEARNING LINKS Centre. The experience from the LEARNING LINKS project suggests that this is more satisfactory than inter-agency management groups, eg the Derry Open Learning Group and the collaborative management arrangements between CET and Kent LEA.

From the experience of the work in four LEARNING LINKS Centres, it is considered essential to distinguish carefully between:

who manages a LEARNING LINKS service
who steers the work of a LEARNING LINKS service
who supports staff engaged in this work.

The management structure can be monolythic or inter-agency. The steering function must be carried out by an inter-agency group in order to ensure that the service is and remains relevant to the local situation. Problems seem to arise when an inter-agency management group also takes on the steering function, especially when members represent vested interests and pull in different directions.

It is possible to combine the support and steering function of an inter-agency group, as was the case in Portsmouth and Stornoway. In fact, experience from the project suggests that this is highly desirable.

There may be other 'mix and match' versions for effective management, steering and support of a LEARNING LINKS service. Whichever formula is used, it is necessary to ensure effective frameworks for:

efficient management of staff and resources
steering of the work
providing support for staff.

b) Staffing

It is virtually impossible to produce clear guidelines on the level of staffing required for a LEARNING LINKS type service since this is totally dependent on which functions the service will perform and how many adults are likely to make use of it.

The four LEARNING LINKS Centres were staffed very differently and consequently chose to adopt different approaches.

In Stornoway, four full-time library staff participated in a training programme and are now responsible for the service. Their specific functions are:

- to collect, process and update information on informal learning in the islands (about 400 activities were identified over a period of 6 months)

- to interview clients and to assist them, where necessary, in the use of the database and the self-assessment program

- to follow up client enquiries by obtaining information from other agencies

- to facilitate (in liaison with other agencies) new informal learning activities for adults.

It was envisaged that support from other agencies would, in time, enable the library to extend the database to include other learning opportunities.

The Derry Centre started with two full-time, short-term staff. This was later increased to three. They were able to process all information (over 1,000 records of learning opportunities), engage in outreach work, carry out a local survey and to deal with all administrative tasks associated with the work. This Centre offered a service every morning and afternoon on five days a week.

In Portsmouth, two half-time staff shared the work, supported by a part-time clerical assistant. Opening hours had to be limited to four short sessions during the week in order to leave enough time for outreach work, support for learners and follow-up activities. Information collection was restricted to informal and non-formal adult learning (around 700 records).

The service for the Medway Towns was staffed by one full-time organiser, supported by three part-time staff and the equivalent of one full-time clerical assistant. This service pursued all the various functions of a LEARNING LINKS service. It also set up a substantial databank on adult lenarning (about 1,500 records).

Any permutations of the four examples above are possible. If existing staff are to take on new roles, it is important to train a small team of workers for the task. If additional staff are brought in, it is important to align carefully the functions of the service with available staff resources. In both cases, adequate clerical support is essential.

What resources are needed?

We have already referred to the need for space affording some privacy for enquirers and we have also discussed staffing implications.

The main expenditure items concern running costs, materials and equipment. The biggest recurring expense is the telephone since many enquiries require follow-up work. In addition, funds are needed for the usual office requirements, such as stationery, postage, etc. Depending on the size of operation, an annual budget of anything between £1,000 and £3,000 might be needed.

Materials and equipment for setting up the service would include: a small reference library, office furniture, office equipment and/or computer equipment.

Budgets for computers will depend on the purpose for which they are intended. The equipment used by LEARNING LINKS Centres consisted of a BBC micro, a Torch disc pack, a monitor, a printer and a modem. Two Centres acquired Torch hard disc units. Our experience would suggest that it is important to research equipment needs carefully. These can not be considered in isolation from software requirements (see Paper TR6, Technical Reports). Since costs of computer equipment are rapidly changing, no figures of expenditure have been included.

What staff training is required?

This obviously depends on

- what staff are required to do (information collection, client counselling, training group facilitators, etc)

- what staff bring to the work.

For instance, while library staff are likely to have good information handling skills, their training may not have prepared them for the role of facilitating informal adult learning. Conversely, staff with a background in open learning/community education may be well equipped to undertake the facilitating role but may lack information skills.

The list of topics for staff training for LEARNING LINKS work is again offered on a self-service basis, ie depending on circumstances and intentions, some items may be more relevant than others.

<u>Adult learners</u>

an understanding of self-directed adult learning
knowledge of adult learning opportunities
knowledge of sources of help for adult learners

<u>Staff/client interaction</u>

an examination of staff roles
appreciation of different interviewing/counselling techniques
strategies for enabling student-negotiated learning
listening skills

<u>Information provision</u>

strategies for obtaining information on adult learning
strategies for setting up databanks
strategies for keeping information up-to-date

Facilitating informal adult learning

- an examination of barriers to learning for adults
- an appreciation of the relevance of informal adult learning
- strategies for matching learners
- liaison with other agencies to facilitate informal adult learning
- support for self-help activities

Promotion of LEARNING LINKS service

- getting the right message across
- agencies which can help
- strategies for promoting the service

The use of computers for adult learners

- skills required for chosen hardware and software (see Paper TR5, Technical Reports)
- awareness training on how computers can be a flexible tool
- client-centred use of computers

Methods used for staff training included case studies, practical work, role-play, handouts and independent learning materials. Training for LEARNING LINKS staff ranged from one to one sessions and small group exercises to residential training days.

While staff should at least have some training or experience of all six topics before dealing with clients, much of the learning required will inevitably not be fully consolidated until it is put into practice. However, a basic grasp of the issues involved in the work should be aimed at through pre-service training, although the emphasis given to each of the six topics may vary from one context to the next.

What is involved in the day-to-day operation of a LEARNING LINKS service?

This will vary considerably depending on the chosen style. For example, the Medway service dealt with more than 1,000 clients at the Job Centre in the same period as the Portsmouth Centre had around 200 enquiries. The Stornoway, library-based, Centre has occasional requests for the LEARNING LINKS facilities while Medway is a full-time service in the same way as the Job Centre.

Whichever type of service is chosen it will involve:

- enquiries from adults and
- assistance for adults provided by staff and/or computers.

Beyond that it can involve:

- the collection and processing of information for adult learners
- interviews with clients and follow-up work
- visiting groups and local agencies
- servicing computer programs
- helping groups to become established
- attending meetings and other functions
- and various other activities as described in the LEARNING LINKS Case Studies.

On the other hand, it could simply involve the provision of computer terminals for client use, provided the information is serviced elsewhere and appropriate programs are available for independent adult use.

The most important question, without which the other questions cannot be fully relevant, has been left to the end. An interactive computer program, however, would have to explore this question at the very beginning, in its introduction.

Why should anyone become involved in the kind of service provided by LEARNING LINKS Centres?

LEARNING LINKS services offer a number of concrete benefits for adults, such as co-ordinated provision of information which otherwise tends to be dispersed and relatively inaccessible. Other benefits arise when the service takes an advocacy role, eg where mature entry is negotiated to a college course which previously did not appear to accept adults. These are but two examples from a larger list of benefits.

However, it could be argued that the benefits are far more fundamental and more far-reaching than the above concrete examples might suggest. They are certainly concerned with assisting adults to achieve their chosen learning goals but, beyond that, they address the needs of our rapidly changing society today.

If we, as education workers, are to contribute to the creation of a truly adult society in which individuals are empowered to make informed choices about their own lives, be it in relation to learning or other matters, we must develop ways of encouraging adults to become more self-directed.

In our everyday lives, we engage in a considerable amount of informal learning but we often fail to recognise the value of the skills and knowledge we have acquired in this way. Yet, for many adults this may be the only, as well as their preferred, mode of learning.

Stimulating informal learning activities and increasing people's awareness of the part they themselves can play in setting and achieving learning goals must be beneficial to individuals and to society as a whole. LEARNING LINKS Centres endeavour to assist adults to overcome barriers to learning which they might find difficult to tackle themselves, eg access to information and establishing learning environments suited to their needs.

It is, therefore, important that as many agencies as possible look at their services for adults and identify ways in which they can extend their work by incorporating some or all of the roles of a LEARNING LINKS service.

GLOSSARY

ACACE	Advisory Council for Ault and Continuing Education
AIM	Action and Information in Medway
CAB	Citizens' Advice Bureau
CET	Council for Education Technology
DHSS	Department of Health and Social Security
ECCTIS	Educational Counselling and Credit Transfer Service
LEA	Local Education Authority
MARIS	Materials and Resources Information Service
MSC	Manpower Services Commission
MTYUP	Medway Towns Young Unemployed Project
NAEGS	National Association of Educational Guidance Services
NEC	National Extension College
NIACRO	Northern Ireland Association for the Care and Resettlement of Offenders
PICKUP	Professional and Commercial Updating, a DES initiative
SCET	Scottish Council for Educational Technology
SEICA	Southampton Education Information Centre for Adults
TSD	Training Services Division (MSC)
TOPS	Training Opportunities Programme (MSC)
UDACE	Unit for the Development of Adult Continuing Education
WEA	Workers' Educational Association

Section 2

CASE STUDIES OF

LEARNING LINKS CENTRES

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INTRODUCTION TO LEARNING LINKS CASE STUDIES

The case studies of the four LEARNING LINKS Centres describe their settings and the steps of developing each service. They also provide details of the operational pattern of the work in each locality and the outcomes to date. Some thoughts about possible futures are included and each case study sets out lessons from experience and conclusions based on these.

The primary purpose of the case studies is to provide detailed information on each development as seen by those involved in each of the four locations. This still holds true for the Scottish case study which was written by Ann Docherty who was careful to reflect the experiences and views of LEARNING LINKS staff in Stornoway.

An evaluative commentary has been added to each case study by the LEARNING LINKS Development Officer. This is intended to identify the strengths and weaknesses of each development as seen from a national development perspective. It also highlights the specific contribution of each LEARNING LINKS Centre to the LEARNING LINKS project as a whole.

Appended to three case studies is an analysis of surveys carried out by these LEARNING LINKS Centres. No commentary has been added to these as it was felt that there was a danger of misrepresenting the total clientele of each Centre by laying too much stress on responses received by a self-selected sub-section. The responses do, however, provide insights into the way clients perceived LEARNING LINKS services. Due to shortage of time and resources, it was not possible to follow up respondents by interview. This was left to local Centres to carry out in their own time.

Due to the timing of the writing of the case studies, they did not include experiences with the LEARNING LINKS guidance program. These are written up separately as a report to the FEU.

Throughout the case studies, a number of concepts relating to LEARNING LINKS strategies have been used. Below are brief descriptions of the definitions used for the project work.

Counselling: This is taken to mean any interaction between staff and clients which involves more than straight information.

Networking: Staff try to establish or become part of an active local network to assist successful referral of clients and information exchange between agencies. In each location, the network may include: library, careers service, AE and FE providers, health education, WEA, churches, advice services, etc.

Outreach: Activities where staff contact individuals and groups in the local community.

Advocacy: Where staff negotiate on behalf of clients with other agencies.

Informal adult learning: Organised learning in non-educational contexts.

LEARNING LINKS CASE STUDY 1 - PORTSMOUTH CENTRE

SCENE SETTING

1 The Local Context

The host agency for the scheme is the John Pounds Centre which is managed by Portsea Community Association and Portsmouth College of Art, Design and FE. It consists of two buildings, separately managed, but jointly developed through a Centre Management Committee.

The Association was formed in 1977/78 and is a registered charity. It runs a range of activities normally associated with community centres, plus an extensive learning programme. Funding has been recruited to provide a Community Education Scheme along with ALBSU funding for basic skills provision.

The Centre is situated in an urban area, south-west of the city. The Ward of Portsea is very compact and bordered by Portsmouth Polytechnic, the Dockyard, railway and the sea. Almost 95% of the housing stock is council owned and the majority of this is multi-story terraced blocks.

The population is around 2,500 people, with a high number of single parents and elderly. The area has long suffered a high unemployment rate and has a workforce mainly of manual professions. With a heavy dependency on the local employers, the Dockyard and Whitbreads, there has been vulnerabilty to the various cutbacks experienced in the last four years.

Prior to the introduction of LEARNING LINKS, there was already an established inter-agency network in which the Association was already involved. Moreover, through its Community Education Programme, it has promoted easy access to learning opportunities. The theme throughout its work is to support individuals and groups in building confidence and skills.

2 Origin of the LEARNING LINKS Developments

After initial informal discussion in January 1984, an inter-agency meeting was held at Portsmouth College of Art, Design and Further Education in February. Agencies represented at this meeting were as follows: Beneficial Foundation, Portsmouth Adult Education Institute, HCC Library Service, Portsmouth College, Portsea Community Association and the WEA.

In March, a steering group was formed and it was agreed that the John Pounds Centre, through its Warden, was the best territorial focus for the scheme as its work had led to a local inter-agency network.

The John Pounds Centre, with its community base, the variety of provision and different levels of entry, formed the necessary supporting environment. The LEARNING LINKS scheme crystalised in a structured format, elements of informal work already existing in educational guidance. The scheme was therefore not only welcomed but also seen as necessary to tie in existing patterns of work.

The initial input was from the Portsmouth College of Arts, Design and FE in providing a part-time worker (Centre Librarian) to collect information for the database from 1st May 1984. This essential part of the scheme was reduced in early 1985 and subsequently increased with additional grant aid from the County and City Councils.

The scheme was housed in the Community Association building, along with 50% of the hardware provided by the Association. Staffing and running costs were grant aided from September 1984 for two years by the County Council: one full-time equivalent Lecturer I (two half-time) and administrative assistance. The Portsmouth City Council also contributed to clerical assistance later in the scheme.

One of the main advantages in the development was that a voluntary association and a statutory learning provider were supporting the scheme with different strengths and qualities. The Association, with its neighbourhood base and communication links into the community network, complemented the College's expertise and organisational skills to provide a comprehensive, effective service.

IMPLEMENTATION

1 Pre-Service Developments

It was agreed early on that the John Pounds Centre Management Committee would be ideal as an established managing body since it represented County Council, City Council, Library, Educational and Community Association interest. This was formally agreed in June 1985.

As was stated earlier, the task of providing considerable resources was an early priority after a base of operations had been identified. Various options for staffing were explored, including the MSC Community Programme and the Shaw Trust.

There was consultation between the College Principal and Centre Warden over potential staff secondments. A series of informal meetings were held with the present staff before they accepted the posts.

The backgrounds of the two staff members were very different. Both had a commitment to developing learning opportunities, one having recently worked in the Open Learning programme and the other on experiential learning projects in association with YTS. Some adaptation was required to transfer their experience to a community setting.

Staff training was, in the main, provided by the CET Development Officer. Apart from the skills associated with the task of counselling clients, the technological aspects of the job had to be mastered. Both staff were given experience in using computer hardware, supplemented by visits from various individuals who willingly gave their time and expertise. In retrospect, it would seem preferable to programme this element of staff development at the very beginning of the scheme and to budget for expert help, rather than depend on development of skills 'on the job' with in-service support.

2 Public LEARNING LINKS Service

Operational pattern

The LEARNING LINKS service operates from a small room on the first floor of the community building. This houses the computer equipment and provides a suitable setting for confidential counselling. It is off the main staircase and therefore visible to people going up and down but is not overlooked. Community Centre staff are able to direct clients to LEARNING LINKS and pass on messages.

The service is open to the public to call in at four periods during the week, covering a morning, an afternoon and two evenings.

Interviews seldom last less than half an hour and are frequently much longer. Prospective clients may call in person or telephone. If an enquiry cannot be dealt with immediately, or follow up is required, an appointment can be made for any time during the week when LEARNING LINKS staff are available.

These are the maximum opening hours that can be offered at present allowing for the varied activities required to fulfil all the aims of the LEARNING LINKS operation. It is felt that there is more demand for the service than can be met with present staffing levels.

During its first year of operation, the service was used by 195 individuals, of whom 132 returned for further guidance on another visit. Of these, 32 were recorded as being unemployed. Initially, more women than men used the service but this was no longer the case by December 1985 when 100 of the 195 were male clients. While recognising that a client's enquiry may fall into a number of categories, a breakdown of the nature of information and guidance provided by the LEARNING LINKS service identified the following.

There were more enquiries relating to formal education than to informal learning (165 and 125 respectively). Of these, 31 were for O and A Level provision and 23 for Higher Education. More than 70 were concerned with skills and job related training. 18 required open or distance learning facilities. The majority of informal learning for adults related to community education and non-vocational adult education (58 instances). 27 enquirers were provided with guidance on self-help groups and 18 on skills and learning exchanges. In addition, 22 enquirers were directed towards voluntary activities.

Information

Information on formal and informal provision within Portsmouth is held on the computer.

A data disc on home-based learning, compiled by CET, complements local information. Brochures and books carrying information on nationally available courses, independent providers and access to Higher Education are kept along with details of contacts and addresses of national organisations.

Access to ECCTIS, which was initially via the phone, will in future be on Prestel. Names and addresses of support agencies, counselling services, etc are kept on file. For all agencies, key personnel, who are supportive to the project, are identified wherever possible so that clients who need to be referred can be put in touch with someone friendly and helpful.

Local information was updated at the start of the academic year. This has now been systematised and it should be possible to up-date more frequently in future.

Working through the programme can provide a chance for staff and clients to get to know each other better. Sometimes there are many options to offer but, where none are available, information about clients' needs and requests can be added to the data bank. Offers of help and requests for skills exchanges are similarly recorded and may also be published through a periodic newsletter sent out to over 100 contacts.

The newsletter reaches many groups and individuals within the network. The Community Work Training Project helps with distribution. Close co-operation between these two projects in Portsea has been made possible by the Advice Worker who is a Portsea resident. She was a key contact. At the outset, staff made a point of involving themselves in the community and becoming known through such activities as the Community Workers' lunches, local fairs and fetes, visits to toy libraries, clinics, adventure playgrounds, etc.

Networking

The project in Portsmouth has close links with many other groups within the city, ranging from community arts groups, adult education, volunteer and self-help support groups, WEA, Advice Centres and MSC, to community projects, health education, probation and rehabilitation services. Some of these links were historical, some have been built up throughout the project as a result of outreach work and following up new contacts with visits, taking up invitations to meetings, infiltrating luncheon clubs, etc.

One such example only is the Community Work Training Project. They have provided support by offering their resources, training and expertise. They distribute LEARNING LINKS newsletters and publicise any special events in their own. They will often refer people to the service. LEARNING LINKS in turn is able to refer people to them and willingly responds to requests for joint action where there seems to be sufficient demand, eg a week of events looking at the needs of women trying to get into paid employment (needing confidence building, training opportunities, experience, etc).

Similar arrangements exist with other groups and the response from the community and adult education to advocacy on behalf of clients with unmet needs has been generous.

This reciprocal interaction seems to have the net result of strengthening each individual project and provides a much more comprehensive range of opportunities for clients.

Outreach

Outreach is considered to be of vital importance. It was felt that the links in the network needed to be extensive and varied if the service was to reach those people who might not normally have access to learning, or think themselves eligible or interested.

The service is advertised through local press, radio, the Adult Education Newspaper and posters and leaflets distributed throughout the extensive city network of providers, groups and projects. An equally important way of bringing the service to the attention of potential users is by taking the computer and database out to groups within the community and using visits and outreach as an opportunity to raise the debate about the value of learning opportunities. Many clients have been referred as a result of contacts made through outreach.

Advocacy

Not all enquiries can be answered by reference to the information held. They may require follow-up and advocacy. Early on, staff found themselves acting as

advocates for the physically handicapped and were able to arrange for the Adult Institute to run a computer class. The WEA has been very responsive to initiatives on women's courses, unemployment and help for the homeless. Work is also going on to help integrate mentally handicapped adults into their local communities.

Staff have sometimes found it necessary to make the first contact for a reticent client or to act as a buffer. At such times, it is important for the co-ordinators to remain firmly impartial and to help the person to make independent decisions based on all the relevant information. The counselling process also requires objectivity. Some clients return several times and may require considerable support. Others may require less personal support but, with lack of employment opportunities and large gaps in provision for training, clients may be required to make difficult choices and decisions which need talking through.

Initiating client-led provision

Counselling and follow-up can take from 50%-90% of working time in any one week. Expanding that side of the work could become self-defeating without putting energy into stimulating new projects and supporting self-help initiatives. One of the primary aims of the project is that it should be client-centred and responsive to need. Not everyone is able to find what they require in current provision. In response to demand, LEARNING LINKS helped initiate new provision to meet these needs.

Staff approach

The staff have their own special areas of interest but are flexible and enjoy the creative opportunities the job affords them. There has been no attempt to divide the roles in any particular way between the co-ordinators. Both do whatever may be required in response to the clients they meet and their own particular contacts. This means that their work is fairly interchangeable. The clerical assistant is responsible for data collection and will in future be responsible for inputting of data. Regular liaison is essential in deciding priorities between the two co-ordinators.

The staff try to keep open lines of communication with the Centre Warden and the management committees of the Centre and Community Association. The Support Group, which has met quarterly, has provided valuable support and a useful forum when lines of communication have got tangled or problems have arisen. It would have been useful to have established the Support Group earlier in the project and to have more frequent meetings.

The relationship with the host agency has, on the whole, proved very supportive to the scheme. More direct communication with the Association may have helped their occasional concerns. The organic structure of the Centre has brought a lot of indirect support/expertise from both Centre staff and members of the community.

3 The Future of LEARNING LINKS

The present scheme has reached a point where staff are cautious in doing further outreach work as they are already working to capacity. It has created a catalytic awareness of learning and the importance of flexible access, both

with the public and learning providers. All staff have given maximum commitment with the inevitable personal problems created by work demands and extensive overtime.

Like many development schemes at this stage, the potential area of work has only started to be uncovered. It was initiated with the minimum of resources felt obtainable at the time and this has caused problems and has at times detracted from the project.

The scheme has undoubtedly been rewarding in supporting individuals to develop awareness of their own potential and explore new learning opportunities. The scheme has proved that the need for such a service does exist. In exploring further development there are a number of issues to be faced.

i) The need to move from the experimental, peripheral development phase into a fully integrated service which becomes a central part of the local educational scene.

ii) Awareness and liaison with similar activities of the MSC, the careers and library services, etc, so that services are complementary.

iii) Identification of the range of clients, ie clearer focus on those disadvantaged through handicap or unemployment, low achievers, etc.

iv) Assessment of financial implications of a comprehensive scheme. Staffing is the major item, despite the use of modern systems for information processing.

v) The sharing of additional resources, ie closer involvement with the Beneficial Foundation in respect of information gathering, etc.

Confidential guidance/counselling has created a supportive environment for local people. It has assisted individuals, raised the awareness of other agencies and has helped to dispel many misapprehensions about systematic learning.

Lessons

Dealing directly with clients expressing such a variety of needs and trying to provide answers where sometimes none exist is a difficult and demanding task. Adequate resources and support systems are essential. A pattern of work must be established which takes careful account of the available resources. This should include a staffing level which can cope with occasional sickness and allow time for study and personal development.

In identifying resources for future development, a much closer job/task analysis needs to be undertaken. For instance, the follow-up enquiry work needs to be looked at to identify the required skills. It may be possible to share this work with the administrative staff to enable more time for discussion with clients. Insufficient clerical support has been provided.

More powerful computer equipment with a faster retrieval system would also improve the service.

Because, for many people, self-help activities are a new way of operating, paradoxically these activities often require a lot of support, especially at the start. Staff, therefore, need time and the right kind of support if they are to continue to make innovations of this kind.

CONCLUSIONS FROM EXPERIENCE TO DATE

Consideration of Factors Affecting the Scheme

The community base has proved the desirability of a resource being accessible through familiarity and proximity while offering flexible opening times.

The operational pattern of the scheme has generally worked quite well but it has to be realised that, whatever client contact time is allowed, there is an equal amount of follow-up and support work time involved.

There needs to be some impetus for taking a regular look at progress and deciding priorities. Strengthening the steering function of the Support Group may be the answer. Staff have felt that more support is needed but were reluctant to suggest an increase in the number of meetings because of pressure of work.

The Centre Management Committee structure has proved very actively supportive. The Support Group, consisting of multi-agency representatives, has worked reasonably well.

The scheme has clearly identified potential problem areas. These are:

i) That 50% secondments produce conflicting loyalties and pressures.

ii) Clerical support needs to be generous in order to maximise client contact time.

iii) A more powerful integrated hardware system would be advantageous.

iv) Support group structure and line-management accountability have to be clearly defined before any scheme starts and mechanisms for staff support have to be built in.

SUMMARY

The location: placing the service firmly within the community has given it what has proved to be its particular strength. Future developments should build on this by involving staff with varying backgrounds and by continuing to build bridges between educational institutions and the community. To make the service more accessible city-wide, it would be necessary to find a more central base or to take it out to other centres on a more regular basis. At the same time, there needs to be more 'inreach work' to contact those people who, for a variety of reasons, do not make contact themselves.

Mary Barka, LEARNING LINKS Co-ordinator
Jil Cuthberg, LEARNING LINKS Co-ordinator
Robin Morgan, Centre Warden
Contributions from members of the LEARNING LINKS Support Group

PORTSMOUTH CASE STUDY - EVALUATIVE COMMENTARY

The development of the Portsmouth LEARNING LINKS service has been an exciting and rewarding experience. Exciting because this centre has explored a number of strategies to stimulate informal adult learning and has produced some interesting and unexpected results. Rewarding because those factors which were identified as positive elements for a LEARNING LINKS development have, on the whole, proved to be significant aspects of the work and some valuable lessons have been learnt through them. This is not to say that this project has not had its share of problems, some of which are related to considerable constraints on resources for the work. The Portsmouth LEARNING LINKS Centre certainly provides a model for a personalised information service operating in a community setting.

Factors influencing the development of LEARNING LINKS in Portsmouth

Early investigations into the suitability of this location for a LEARNING LINKS service seemed to indicate that the following aspects might be regarded as 'fertile soil' for the work:

An existing network where a range of local agencies were already working together. These included further and adult education, the WEA, the library, the John Pounds Community Association, the leisure services and others. Given the envisaged tasks of LEARNING LINKS, I had always thought that these could only be achieved by tapping a supportive network and the existence of links across agencies was therefore most welcome.

The possibility of developing a service in a community centre was also attractive since I was looking for non-institutional settings where LEARNING LINKS could become an integral part of the work of a host agency with an interest in adult learning. The John Pounds Centre was already engaged in encouraging learning activities within the Centre. The management committee of the Centre also provided a ready-made structure for managing a new project.

The location of the community centre, ie in a fairly deprived area of the city, provided the initial focus since the local adult population would, on the whole, not tend to engage in formal education.

While these three are not the only factors in selecting this location, they were certainly the most significant.

Strengths of the Portsmouth LEARNING LINKS Centre and contributing factors

There is no doubt that the local network has been crucial in assisting the work of this project. LEARNING LINKS staff have not only used existing links but extended and strengthened the network of local agencies and individuals. Its value in terms of access to information, contacts for clients, assistance with setting up new provision and support for staff has been considerable.

While recognising the restrictions imposed on the service by the limitations of the premises available for LEARNING LINKS, I nevertheless think that the community centre setting for the service has enabled it to become the people-centred, community-based service I had hoped for.

It is interesting to note that staff experience suggests that, in order to be effective within Portsea in the long term, it was important not to restrict

activities to this community only but to involve agencies and clients from the wider Portsmouth community. They did, however, find that informal adult learning was appropriate for the initial target population of the LEARNING LINKS service. Other factors contributing to the success of the informal initiatives were: the vision and insight into this kind of activity brought to the work by the Portsmouth LEARNING LINKS staff; the databank on informal learning including client offers and requests; the support offered by such agencies as the WEA; and the support given to staff within the community centre.

The management structures were most effective in getting the project off the ground and in attracting additional resources as the work progressed. Line management for staff was less satisfactory, due to the fact that they were employed by the Art College and worked there for 50% of their contract time, while the other half was given over to LEARNING LINKS which was managed by the Community Centre Management Committee with the Warden as day-to-day liaison officer. In addition, CET was closely involved in steering the project and provided staff training. This complex employment and work management inevitably caused a number of tensions and communication problems, especially in the early stages.

Staff at this centre were enthusiastic about the use of a microcomputer, despite experiencing technical problems and without much previous experience of using the new technology. They developed an imaginative and versatile approach to the use of the databank and integrated this facility into client counselling. Their informal approach seemed effective with individual enquirers and with groups. Their strong emphasis on outreach work, taking the equipment to fairs, local groups and conferences, produced results in making the work known and in contacting potential LEARNING LINKS clients. Their personal interest in work with the disabled and in women's issues is reflected in the activities they initiated for these target groups.

As indicated above, this project was operating under a number of very real constraints.

While its setting within the Community Centre is, in my view, ideally suited to LEARNING LINKS type work, the actual physical facilities are inadequate due to the lack of space and the first floor location. Access can also be affected by the need to lock outside doors on certain evenings. Those involved in the work are aware of these contraints and in time, no doubt, solutions will be found.

Staffing level has been a problem. It was envisaged that, at least in the early stages, the service would concentrate on Portsea exclusively. This was not the case, partly for the reasons outlined above but also because there seemed to be pressure from various agencies to become a city-wide service. Once the details of the service had been distributed across the city, there was no hope of controlling who would use it. The range of enquiries and the activities undertaken by LEARNING LINKS staff became very wide, resulting in additional pressure on staff during this development phase.

The ad hoc arrangements for clerical support were unsatisfactory and meant that, for a time, the two co-ordinators had inadequate administrative support. It also resulted in difficulties with collecting and updating information. These problems have been resolved but their effects on the project were quite marked.

In my view, there could be an advantage in having better defined staff roles, in order to give co-ordinators more freedom within specific responsibilities

while still working closely together on the core tasks. Lack of regular face-to-face contact, due to the 50% nature of the work contract, produces communication problems which are increased by the total interchangeability of roles.

Conclusions

For effective LEARNING LINKS work in future, a number of changes may be necessary. The location of the service needs to be more accessible and more space is required. It would be desirable to have ground floor accommodation closer to the public user areas of the Community Centre.

Staffing levels should be increased or staff roles may have to be redefined. Its future target population should be more clearly defined but its size will depend on the resources made available by Hampshire County Council.

There is no doubt that this development has made a significant contribution to achieving the original aims of the LEARNING LINKS project. It has provided insights into what student-negotiated learning looks like in practice and has developed strategies for stimulating and supporting informal adult learning. The new technology has played a central role in the work, especially in relation to the provision of information.

Dorothea Hall,
January 1986

APPENDIX 1

Analysis of 31 responses (from 160) received from Portsmouth LEARNING LINKS clients.

	Number of responses
1. What were you enquiring about?	
- a particular interest or subject	20
- how to go about learning/studying	10
- qualifications	4
- where to find a particular course or other learning activity	18
- what you should do next	8
- something else	3
.....	
2. What made you come to LEARNING LINKS for help with your enquiry?	
- referral by another agency	4
- referral by Job Centre staff	1
- publicity leaflets/posters	7
- talks on the radio	0
- because you had met LEARNING LINKS staff	13
- other reasons	8
.....	
3. Were LEARNING LINKS staff able to provide suitable information or guidance?	
YES	27
NO	4
If you answered YES, please complete the section below:	
Were they able to help by	
- giving you details of local learning activities?	14
- giving you details of learning activities elsewhere?	8
- referring you to other agencies?	5
- putting you in touch with other people with similar interests?	3
- contacting a college on your behalf?	6
- giving you other help?	6
.....	

If you answered NO to question 3, please complete this section:

Why do you think staff were unable to help?

- because LEARNING LINKS did not have the information	2
- because LEARNING LINKS staff did not fully understand your enquiry	1
- because LEARNING LINKS staff did not spend enough time with you	0
- because there were no learning activities available to suit you	1
- because you weren't really sure what you wanted at that time	3
- for other reason	1
.....	

4. Did you act on the information and guidance given to you by LEARNING LINKS?

YES	19
NO	8

If you answered YES

Was the outcome satisfactory for you?

YES	16
NO	3

5. Would you go back to LEARNING LINKS for further information and guidance if you wanted help with learning activities in the future?

YES	27
NO	2

Would you be willing to be contacted by someone to talk about your enquiry to LEARNING LINKS?

YES	20
NO	11

If you are able to help, please complete the section below.

Name: Telephone:

Address:

Thank you for your assistance.

APPENDIX 2

Client Case Study 1

Julie telephoned LEARNING LINKS after seeing the advertisement in the Adult Education Newspaper. She had contacted one of the FE Colleges about signing on to do O Levels. She knew that enrolments were due to take place the following week and felt she had to make up her mind quickly. However, she was unsure about which direction to take and didn't feel she knew enough about what was on offer to be sure of making the right choice. She asked if we could tell her about Business Studies courses and hairdressing training.

We arranged an interview and discussed Julie's hopes of running a hairdressing business one day. Julie is a young single parent who had dropped out of taking O Levels at school in order to get married. She was keen to catch up on her exams. Her mother was happy to look after her child for the few months until he became of school age, so returning to college full time was not a problem.

We made enquiries about full-time courses in Business Studies and Hairdressing and it was possible to arrange informal interviews immediately because teaching had not commenced. The local college offered to make an exception about the age limit and give her a place on the new CPVE course. They felt that she was not sufficiently well qualified to do the BTEC course and, like the hairdressing, the PT Courses on offer were day release from work. The choice locally, therefore, seemed to be between doing O Levels this year and then applying for a full-time course next year, or taking up the CPVE offer with school leavers.

Julie felt that, if she took up an FT Hairdressing course, she would miss out on the O Levels which she was keen to do and would not necessarily gain enough business knowledge. She decided that she was more keen on business than on hairdressing and could learn hairdressing more easily later 'on the job'. She was also unsure about how her supplementary benefit would be affected. We were able to reasuure her that, as a single parent, she would continue to receive it if she took up studying.

We were also able to supply information about part-time courses at other FE centres in the area and arranged for Julie to speak to someone about an evening class in Business Studies which was aimed at mature students. She went up there on the first night and was delighted with it and signed on.

We had already talked about flexi-study and, after looking at the combination of subjects available at evening classes, Julie decided that she preferred to sign on with the Open Learning Project at the local college to do English and Maths. She liked the flexibility it gave her.

The evening class is a 2 year course but Julie hopes that, if she gets good results in her exams, she can take up a full-time course later, or combine it with employment.

Client Case Study 2

Jane came to Learning Links through a personal contact, to ask about training for work in libraries. She had begun to think of this area as offering possibilities for employment but was not sure what was involved or if she would qualify. She was given some information and put in touch with someone in the library service who could tell her more about it.

Jane came back a few weeks later and said that a vacancy had been advertised for which she wanted to apply but she was worried about what to put on her form and about getting through the interview. It became apparent that her worries stemmed from her own uncertainties about why she was applying for the job. She was offered a couple of sessions to talk about it.

Jane had been without paid employment for a couple of years after giving up a job in an office where, for a year, she dealt with invoices for cans of food. She had grown to hate the job but later felt people around her thought she had thrown away a good opportunity. She had taken a Business Studies option at school, largely because she did not think she was good enough to do anything else. She had helped with the local club for mentally handicapped children and offered her services voluntarily for a year to the local college course for ESN school leavers. She then obtained some paid work as a Family Support Worker with Social Services, a job which mostly involved looking after elderly and disabled adults. She enjoyed this up to a point but eventually felt that she had had enough. This had led to doubts about her own ability to stick at things and anxiety about making the right choices.

Since leaving the job, she had discovered a great enthusiasm for sociology and had passed O Level in one year through the Open Learning scheme. She had begun really to enjoy books.

Through discussion, we were able to identify the positive aspects of Jane's history: her interest in people, her wide ranging interest in social issues, her commitment to causes which she feels are important, her need for progression and development in her work, her desire to use her skills in a flexible setting and her growing confidence in her intellectual abilities. At the end of the sessions, she said that she felt more confident about the direction she was going in and she was delighted to get through the first round of interviews. She did, in fact, get the job, is very happy with the choice she made and six months later is contemplating taking up another subject to study.

LEARNING LINKS CASE STUDY 2 - MEDWAY CENTRE

SCENE SETTING

1 The Local Context

The area of Medway, which LEARNING LINKS in Gillingham was set up to serve, comprises five main towns, Rainham to the east, followed by Gillingham, Chatham, Rochester and Strood going westwards, set against a backcloth of farmland. The population is in the region of 250,000, with unemployment in 1985 standing at 15%, approximately.

Until the late 1970s/early 1980s, the largest employer was the Royal Dockyard. Other industries centred on paper and cement production, oil refining and heavy engineering. There were also many smaller engineering concerns. The west of the area, adjoining Gravesend, is a mix of high grade agricultural land, marshland and industry.

Old Rochester is given over to a developing tourist industry. Chatham is the commercial centre of the towns but its importance has declined in recent years. Gillingham largely comprises old residential property and is flanked by five new housing areas. Gillingham Business Park became part of the NW Kent Enterprise Zone in 1983, a status recently also accorded to the Chatham Dockyard area.

The collapse of the dockyard and other industrial concerns had a catastrophic effect on the rate of unemployment, with the corollary of 'knock-on' affecting all sectors of business and commerce. While there are local art initiatives, and the leisure industry plays a large part in the area, culturally this part of Kent has been likened to a desert.

2 Origin of the LEARNING LINKS Developments

LEARNING LINKS in Gillingham was the outcome of negotiations between CET, the Adult Education Service in Kent, the Further Education Unit and the MSC.

It built upon an existing adult education project funded by Kent County Council and took on its part-time staff. This project therefore benefited from the experience already gathered from work amongst the unemployed in the Medway towns. The original RUM project (Recreation for the Unemployed in Medway) took on a new focus under LEARNING LINKS but retained the same target population and geographical setting.

CET was successful in obtaining funds from the Further Education Unit under the REPLAN scheme and was able to appoint a full-time worker for this project, as from September 1984. In addition to her local responsibilities for the Medway project, she also had a brief to assist CET with the development of an interactive guidance package for the unemployed.

A Job Centre was chosen as a suitable place to locate a project whose main aim was to enable unemployed people to become involved in learning opportunities. Negotiations with the MSC resulted in an offer of the Gillingham Job Centre for the Medway LEARNING LINKS project. Office services for the project were offered by the Gillingham Adult Education Centre and it was fortunate that the two locations are within walking distance of each other.

LEARNING LINKS in Gillingham is a good example of how collaboration between national and local agencies can produce the resources needed for a major project for the unemployed. In this case, CET provided some funding and expertise for staff development and support, the Further Education Unit contributed resources for a full-time worker, a part-time clerical worker and for the overheads of the project, Kent supported the part-time project staff including a clerical worker and the MSC made premises available.

IMPLEMENTATION

1 Pre-Service Developments

Kent part-time staff were involved in the LEARNING LINKS project as from April 1984. However, the full-time project officer was not appointed until September 1984. Preparatory work for the project, in particular the collection of information on learning opportunities in the Medway area, was therefore carried out by part-time staff in anticipation of the project being extended through additional funding. By the summer of 1984, much information had been collected, particularly data relevant to unemployed adults returning to formal education or wishing to take up informal learning opportunities in the area. With the appointment of the full-time worker who previously had worked with YTS and Adult Basic Education students, this work was consolidated and preparations for the opening of a LEARNING LINKS service in the Gillingham Job Centre were made. Two clerical workers were also appointed. Subsequently, some staff changes took place but the broad roles devised for the staff at the beginning of the LEARNING LINKS project were adhered to, ie two part-time workers working off the premises for most of the time, with other staff being based at the Job Centre, the former concentrating on outreach work and information collection, the latter on dealing with enquirers.

2 Management Structure for LEARNING LINKS

During the CET development period, an FEU Steering Group was set up. This comprised representatives of all agencies involved: Kent Adult Education Service, Further Education, MSC, FEU, CET and the LEARNING LINKS project staff.

Originally, it had been envisaged that a management team, consisting of local adult education and MSC staff, would be formed to support the project at local level. However, for a variety of reasons, this did not materialise. Prior to the opening of the Gillingham service (early November 1984), a number of training sessions were carried out by CET, concerned with the running of the project generally and more specifically focussed on training in using the hardware. Suggestions for networking and data collection were forwarded by the CET Development Officer.

Prior to opening the Job Centre and immediately afterwards, there were problems due to the nature of the project, the Kent part-time workers finding it difficult to accept the role of a national development agency such as CET in steering what they regarded as principally a local project. These early tensions were heightened by the fact that the project was to serve across the territory of two Adult Education Centres (Gillingham and Rochester) and this was exacerbated by its location in one of the Centres. These matters were to have uncomfortable implications for the early development of the project.

3 Public LEARNING LINKS Service

As from November 1984, a LEARNING LINKS service was offered in the Job Centre in Gillingham on five days per week, one of these being a half day. Responsibilities in the Job Centre were shared between the full-time worker and one of the Kent part-time staff. Since no pattern in numbers attending the Job Centre has emerged, the original arrangements have been adhered to.

During its first year, record sheets for a total of 1,044 enquirers were made out. Of these, 910 were unemployed while the rest were in paid jobs. More men than women consulted LEARNING LINKS, 571 and 473 respectively. These figures include people seen in Job Centres, community groups, etc. Record sheets have not always been kept for brief enquiries.

During the first year, information on local learning opportunities was gathered locally but computerised by CET staff. The information held covered a wide range of learning opportunities in the Medway area, ranging from college courses to drama clubs. The demands for particular information are affected by the setting, eg in the context of the Job Centre. In this location, there is an emphasis on vocational courses while information on general learning opportunities is in greater demand when outreach workers visit community groups.

The major problem with any information bank is the regular need for updating. In the case of non-exam courses, this tends to need attention at the end of each term and cannot be spread out over the months.

4 Networking, Outreach and Advocacy

a) Locally: encouragement of an active network in Medway has proved useful for the successful functioning of the service, though difficult to set up, due to the diversity of agencies across the Medway towns.

This project has helped foster the concept of inter-dependency and support for project and agency workers, and promoted the idea of the adoption of a more unified approach to the problems of unemployed people.

b) Nationally: Linking in to the national network has a number of advantages. In particular, information about initiatives in other areas can provide one place with new perspectives on local situations and the LEARNING LINKS project at Gillingham has been afforded support, encouragement and ideas from workers outside the immediate confines of Medway.

Outreach work developed initially through known contacts. As the project became known, requests for visits, talks and suggestions increased and formal and informal groups developed from outreach and networking. An example of the former is a tutored do-it-yourself class in a family centre under the auspices of adult education; of the latter, a Health Group which focussed on healthy eating and life-style.

As a result of this work and to support new groups in the future, a course in group facilitating and leadership was undertaken as a joint venture between LEARNING LINKS and the Gillingham Adult Education Centre.

Inter-agency co-operation in outreach work was not always easy to organise. Agencies understandably focussed first on their own concerns and pressures of work. This often prevented co-operation reaching a high level of priority.

As was mentioned earlier, LEARNING LINKS staff saw a large number of clients in the Job Centre setting. On average, a client would spend about 20 mintues with staff who aimed to use a non-directive counselling approach in their work. However, given the low self-esteem and motivation of many unemployed people, it was easy for staff to fall into the trap of using a more directive approach.

LEARNING LINKS staff frequently contacted colleges on behalf of certain students although, on the whole, they tended to encourage them to negotiate for themselves, helping them to clarify in advance their approach.

New courses were started in Adult Education Centres, on the basis of needs expressed, eg DIY, Basic Literacy (Pre-TOPS), Car Mechanics for Women and Life and Social Skills.

Some progress was made on behalf of clients who wished to infill on a part-time basis into full-time courses at the local college (under the 21 hour rule). There appear to have been several problems here for unemployed people. Firstly, the shortage of actual places on popular vocational courses, eg in practical skills such as bricklaying. Secondly, the attitude of some college tutors, which on occasions was unhelpful as they felt older students might experience difficulties studying alongside their younger counterparts. A third problem was posed by the high cost of provision which is set at county level for all courses, including those for the unemployed. LEARNING LINKS staff investigated these and other problems on behalf of the unemployed.

Stimulating informal activities

Informal learning was defined as activities which took place outside mainstream 'tutored' provision, by groups of individuals working independently with no tutor or formal teacher. The emphasis of the work was decided by the discovery of many groups and individuals, away from main centres, who were taking part in meaningful learning.

Staff, however, found that it was difficult to involve the unemployed in such learning activities since they often lacked the confidence to participate in exchanges or self-help study groups. Much groundwork is therefore needed prior to the inception of informal initiatives. There was little success in establishing learning exchanges: people were reluctant to part with their knowledge and wary of working closely with people with whom they were not familiar. Several self-help groups flourished with the support of LEARNING LINKS facilitators, eg Life and Social Skills groups, University of the Third Age, Flexi-literacy group. Established groups were often keen to try something new. Sometimes though, attempts proved abortive through the lack of support and commitment of the group leader who might feel threatened by another agency's involvement.

LEARNING LINKS staff noticed that the ambience of Job Centres does not lend itself to the nurturing in individuals of the idea that informal learning is a valid way to acquire knowledge or skills.

It was also found that staff who had previously worked on the RUM project, where their main brief was to increase take-up of main stream provision by unemployed people, found it more difficult to accept that informal learning had a place in the curriculum, than staff especially recruited for the LEARNING LINKS project.

THE ROLE OF INFORMATION TECHNOLOGY

The aim of establishing a computerised information bank of learning opportunities was to provide adults with up-to-date information on all options open to them at any level, to enable them to become involved in learning opportunities, including informal activities. The project made good use of databanks for this purpose. However, staff felt the need for more speedy retrieval of information.

LEARNING LINKS in Gillingham took a particular interest in the development of the interactive guidance program as the full-time member of staff was closely involved in this development. It was also the first Centre to pilot this program and contributed substantially to its subsequent amendments and improvements.

Staff found the Torchmail and Wordstar facilities most useful but they felt that Prestel was rather expensive.

Relationship with host agency

Job Centre staff regularly referred clients across to the LEARNING LINKS desk. Initially, Job Centre staff put the main emphasis on vocational information which might be obtained from the LEARNING LINKS desk. A staff development day for MSC and Adult Education staff offered by CET extended the interest of such referrals to include some non-vocational elements. This kind of joint training exercise was also a means of ensuring that two separate, local organisations (AE/Job Centre) began to utilise each others' services more fully. In a similar way, links across national agencies (FEU/MSC/CET) made the use of national resources more effective.

As time went on, LEARNING LINKS became more of an integral part of the set-up in the Job Centre. Referrals from other agencies became more frequent as the local network was strengthened. A weekly local radio spot (on BBC Kent) attracted contact from agencies and public alike.

During the first year, Gillingham developed links with the Portsmouth Centre but had little contact with the LEARNING LINKS Centres in Northern Ireland and Scotland. However, communications increased in number after residential staff training days in late 1985.

The future of LEARNING LINKS

By early 1986, LEARNING LINKS in Gillingham was an established part of the provision for unemployed people in Medway. The project became accepted as a 'centralised' agency, supplying information on learning opportunities or the means to acquire this. The service is used by professionals and public alike and it is an integral part of the Job Centre setting. Increasingly, social and community workers were approaching LEARNING LINKS to start groups in various settings, since it was seen to be able to provide a new perspective on existing activities. Staff, however, felt that there was still considerable work to be done, especially in the area of networking. It became obvious that LEARNING LINKS had only just touched the tip of the Medway iceberg and that there was still a vast amount of work to be done in areas hitherto unreached.

CONCLUSIONS FROM EXPERIENCE TO DATE

Factors affecting the Gillingham LEARNING LINKS service, as reported by LEARNING LINKS staff

1. A more centralised base within the Medway towns might have been advantageous, although any potential difficulties arising from an off-centre position have been overcome by a thorough outreach approach and good publicity.

2. The time which could be made available to the public in the Job Centre seemed restrictive at first but this was necessary to allow time for the development of other LEARNING LINKS activities.

3. Regarding the project's management, on the whole this was felt to be satisfactory. Support from CET was found to be good, although the Development Officer was on occasions unavailable for help, due to her national commitments. A local management group might have provided valuable back-up, especially in relation to the management of staff and resources.

4. Early difficulties arose due to the fact that the full-time worker took on an able team of part-time workers from a previous project where they were used to working fairly independently and whose personal priorities rightly were concerned with meeting local demands. The full-time worker also had to take account of the needs of national organisations concerned with the project (for reports and meetings). Meeting these needs was an important part of the work but there was little inter-agency planning and, on occasions, this led to considerable time management difficulties.

5. The database package proved to be a useful tool, although information collection and updating were time consuming and search speeds on the equipment seemed relatively slow. However, the computer afforded the project a useful focus and a centralised source of information was found to be extremely useful.

6. Work with clients threw up a problem which we had not anticipated beforehand: provision of a range of choices of direction can sometimes actually confuse the potential learner. While it is tempting for the counsellor to explore the full range of options, it is really more useful in some cases to ask the enquirer to consider the present discussion and return later for a second interview.

7. Informed choices are only really possible if they are backed up with relevant provision (informal/formal). Very often, it has proved impossible for the 'learner' to pursue a certain goal against the existing financial backcloth of Kent.

8. Much effort has been spent on the development of the informal side of learning. The major lesson learnt was the identification of the need for a competent group facilitator, whose job would include getting the group off to a good start, setting ground rules and establishing goals.

LEARNING LINKS staff noticed a reluctance by individuals to take charge of their own learning since they seem to have been used to being taught or managed in various capacities; if one adds to this the low morale of the unemployed, one can appreciate why the problem exists. Much time must be spent on building up the confidence of unemployed people, even before they can set out on their chosen path.

Transferable lessons from the LEARNING LINKS work

1. Considerable groundwork is needed in dealing with both clients and other agencies if the idea of LEARNING LINKS is to have any chance of success.

2. Staff training needs to be regular and gradual, in order to assimilate the vast range of information and concepts, a large proportion of which was new to those engaged in the work.

3. A second work station is a fairly high priority if varied applications of the new technology are to be maintained by LEARNING LINKS services, although it is difficult to see how this could have been achieved given the present financial contraints.

Moira Henderson, Project Officer
December 1985

This Centre, for various reasons, attracted the greatest attention. Many visitors came and went and more reports exist on this LEARNING LINKS service than on any other. The main reason is, of course, the involvement of three national agencies (CET, FEU and MSC), each with its specific interests. In addition, its location, within easy reach of London, produced another group of callers, including UDACE representatives and LEARNING LINKS advisory staff.

Centre staff were able to contribute to REPLAN discussions on work with the unemployed, to regional conferences and local initiatives. Another feature of the work in Gillingham was the role it played in the development of an interactive guidance program for the unemployed.

This high profile, however, was achieved against many odds and by overcoming a number of obstacles.

Factors influencing the development of a LEARNING LINKS Centre in Gillingham

Through former work contacts, I discovered in early 1984 that an existing adult education project for the unemployed in the Medway towns was looking for a new direction before re-applying for funding to KCC. Since the four part-time RUM workers were interested in the LEARNING LINKS ideas, and because their existing knowledge of the locality together with the many contacts they had made would provide a good starting point for LEARNING LINKS, negotiations went ahead.

In order to give this project the staffing level it needed and to implement my plans for developing an interactive guidance program, a submission was made to the FEU for funds (under the REPLAN scheme). The envisaged location was the Chatham Job Centre, the target population the unemployed in the Medway towns. This scheme gave the project the full-time worker it needed.

The funds became available but the location did not materialise. The success was partly due to the enthusiastic support from Kent adult education staff, although the failure to obtain the requested location meant that the service would have to operate from non-central premises in relation to the five Medway towns. However, it was encouraging to be able to work in a Job Centre, at a time when the role and operation of Job Centres was under discussion by the MSC.

Strengths of the LEARNING LINKS Centre at Gillingham and contributing factors

The output of this Centre, as indicated above, has been quite remarkable. Despite early local predictions to the contrary, it has served a very large number of clients. Although the client survey suggests that more than half of these did not act on the information and guidance received, this does not necessarily mean that staff time was wasted. It is generally accepted that adults, especially the unemployed, require time and more than one stimulus to become motivated enough to act on information/advice.

During the first year, staff collected information on a wide range of learning opportunities by collaborating with local providers and by painstakingly seeking out details of informal activities. They also negotiated with the MSC so that they could include information on TOPS courses on their databank.

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As the project progressed, and as staff gained knowledge and expertise in counselling the unemployed, the advocacy role of the service emerged as an essential aspect of the work, be it on infill arrangements under the 21 hour rule or on questions related to mature student entry.

Outreach work and networking activities 'took off' in 1985 and resulted in a number of interesting local initiatives. While staff found it difficult to promote self-directed informal learning in the Job Centre context, they were able to achieve this by going out to groups, contacting local agencies and by collaborating with the adult education service. Some learning exchanges, as well as a number of groups, were facilitated and supported by LEARNING LINKS staff.

When the project started, there was no existing network across agencies working with the unemployed in Medway. It was a difficult task to create supportive links but the fact that a local conference on networks was held is evidence that tenacity and determination can succeed.

Discussions with staff provided many insights into the personal and learning needs of the unemployed. These fed the ideas and influenced the design of the guidance program. Staff contribution to its development in other ways, in particular during the piloting phase, has been valuable for national LEARNING LINKS development work.

Constraints of LEARNING LINKS developments in Medway

This project suffered many setbacks and had to face some serious problems.

Initially, the delay in obtaining FEU funding, partly due to protracted negotiations over Job Centre premises, meant that morale amongst the part-time Kent staff was low by the time the full-time worker was appointed. Understandably, Kent staff also found it difficult to adapt to a scheme which, in contrast to their former local project, involved national agencies in steering and monitoring the work and which brought in a new full-time co-ordinator. In fact, some staff changes took place before the LEARNING LINKS team became the effective workforce visitors may remember.

As this service was partly funded by the FEU, a Steering Group was formed to support and advise the project. Although only responsible for the FEU work, this group became the forum for discussions on the overall LEARNING LINKS work in Medway. It had been envisaged that a small, purely local management team would be established, taking on responsibilities for managing and supporting the local LEARNING LINKS project. This did not materialise, partly because of the forthcoming reorganisation of the Kent adult education service.

Because this project is a unique example of collaboration between national and local agencies, it had many demands made upon it and staff were aware of disparate responsibilities. Apart from accommodating the wishes of three national agencies, it also had to try to please the interests of two local Adult Education Centres and work with the two other Job Centres in the Medway towns.

Conclusions

Much has been learnt about the actual and potential role of a LEARNING LINKS type service in a Job Centre. The evidence from this project suggests that a

LEARNING LINKS type service has a signifcant contribution to make as an extension of the work of Job Centres.

A deeper understanding of the learning needs of the unemployed has been gained, both in relation to the formal education sector and to existing and potential informal learning activities.

Under the present REPLAN initiatives, the LEARNING LINKS service in Gillingham has been recognised by the FEU as one of the effective models for ensuring appropriate learning activities for the unemployed.

The present model of the service works well with its mix of centre-based and outreach activities. Given a more coherent pattern of collaboration with the other two Job Centres in Medway and additional resources for such work, this project could become an important feature of services provided by the MSC in this locality.

However, the fact that all staffing costs are borne by Kent LEA and national agencies means that it is unlikely that this service will retain its focus on the unemployed and its present location. In the absence of a local management team, it is difficult to make predictions about the future role of LEARNING LINKS in Medway.

Dorothea Hall,
January 1986

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APPENDIX 1

Analysis of 51 responses (from 200) received from Medway LEARNING LINKS clients.

	Number of responses
1. What were you enquiring about?	
- a particular interest or subject	29
- how to go about learning/studying	13
- qualifications	12
- where to find a particular course or other learning activity	29
- what you should do next	5
- something else	7
.....	
2. What made you come to LEARNING LINKS for help with your enquiry?	
- referral by another agency	2
- referral by Job Centre staff	25
- publicity leaflets/posters	13
- talks on the radio	0
- because you had met LEARNING LINKS staff	9
- for other reason	8
.....	
3. Were LEARNING LINKS staff able to provide suitable information or guidance?	
YES	31
NO	18
If you answered YES, please complete the section below:	
Were they able to help by	
- giving you details of local learning activities?	15
- giving you details of learning activities elsewhere?	7
- referring you to other agencies?	5
- putting you in touch with other people with similar interests?	2
- contacting a college on your behalf?	9
- giving you other help?	6
.....	

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If you answered NO to question 3, please complete this section:

Why do you think staff were unable to help?

- because LEARNING LINKS did not have the information	8
- because LEARNING LINKS staff did not fully understand your enquiry	3
- because LEARNING LINKS staff did not spend enough time with you	2
- because there were no learning activities available to suit you	8
- because you weren't really sure what you wanted at that time	1
- for other reason	1
.....	

4. Did you act on the information and guidance given to you by LEARNING LINKS?

YES	20
NO	28

If you answered YES

Was the outcome satisfactory for you?

YES	13
NO	7

5. Would you go back to LEARNING LINKS for further information and guidance if you wanted help with learning activities in the future?

YES	46
NO	4

Would you be willing to be contacted by someone to talk about your enquiry to LEARNING LINKS?

YES	30
NO	21

If you are able to help, please complete the section below.

Name: Telephone:

Address:

Thank you for your assistance.

APPENDIX 2

Client Case Study 1

Wendy visited us in the Job Centre in February. She wanted to do a course in order to obtain a 'really good' job as she needed a decent wage to support herself and 11 year-old son. She had been out of employment since giving up a secretarial job at the birth of her son. She felt that computers were the in thing, although accounts/book-keeping appealed.

We talked about how she would like to study. She expressed interest in distance learning, if it would free her time during the day to be around for her son. She wanted as much information to consider as possible and seemed desperately keen to make the right choices: she felt that, although she lacked confidence to go back into full-time work, she had to earn a good living.

She took details of all available classes on computer studies, including word-processing at Mid-Kent, with a printout of A Level Accounts at the college and distance learning Accounts at Wolsey Hall. I thought she could benefit from Threshold as an introduction to the possibilities for women returners to work: the variety and choice appealed to her. She would call in to the Threshold office later in the week (she lives in Rochester).

Client Case Study 2

Rose had completed a DATEC course at the College of Design but had an opportunity to start in business as a screen printer. I could not suggest a suitable crash course so I rang ECCTIS who rang back later to suggest that the London College of Printing may be able to help her. She was then informed. I also suggested that she should speak to Tony of the Adult Education Centre who ran workshops in screen printing.

LEARNING LINKS CASE STUDY 3 - DERRY CENTRE

SCENE SETTING

1 The Local Context

During the first year of operation, the Derry LEARNING LINKS Centre was located within a Centre for the Unemployed in the city of Derry. Derry is situated in the North-West of Ireland with a population of about 92,000. This geographic setting, allied to other social, economic and political factors, has resulted in high unemployment. The proportion of unemployed in 1985 was over 30%, though this varied greatly from area to area, male unemployment being substantially higher than female unemployment (in one area of the city male unemployment was as high as 75%). One reason for this is obviously that many housewives fail to register as unemployed. Another is that the shirt industry, which employs few men, has been traditionally the largest and most secure source of employment in the locality.

Male employment prospects have suffered greatly with the closure and rationalisation of many of the mechanical engineering firms that boomed in the sixties. Two decades of violence and political agitation have further exacerbated these problems. This is particularly true in Derry where the Protestant and Catholic communities have polarised to such an extent that the great majority of Protestants have moved to the Waterside district of the city (ie the East Bank of the River Foyle), while the majority of Catholics reside on the West Bank. The Centre for the Unemployed is also on the West Bank, albeit in a relatively 'neutral' location on the fringes of the city's main shopping area.

The Centre for the Unemployed was born out of a project instigated at the local Institute of Continuing Education. Under the supervision of local adult education tutors, a group of unemployed were encouraged to establish the Centre and eventually total control was invested in their hands. The Centre has been open over three years. Activity has largely revolved around the provision of a wide spectrum of classes for the unemployed. The Centre also offers a Welfare Rights Advisory Service and houses the local Women's Aid Group. Despite these facilities, many observers have commented on the seemingly sparse attendance at the Centre, in an area with so many unemployed.

The Centre agreed to be host to the LEARNING LINKS service without any rent being charged. Financial constraints and other considerations at the time made this seem an attractive offer and we took up office in October 1985.

2 Origin of the LEARNING LINKS Developments

It is largely due to the enterprise of a tutor in the local community workshop that the LEARNING LINKS Centre was eventually located in Derry. He read in CET News about the intention of the Council for Educational Technology to establish a number of LEARNING LINKS Centres throughout the UK. He contacted their representatives to discuss the viability of siting one in Derry. The CET Development Officer requested a meeting with interested individuals from a number of difference bodies in order to discuss details of the proposed development, such as suitable host agency, funding and staffing. As a result of this meeting in early 1984, interested individuals who were involved in these early negotiations with CET formed the Derry Open Learning Group. This comprised representatives from Ulster University, North-West College of Technology, Centre for the Unemployed, Derry Youth and Community Workshop,

World Development Group, Workers' Education Association and the local libraries. Later in the year, a representative of the Western Education and Library Board was co-opted on to the Group.

The Derry Open Learning Group became a constituted voluntary group, appointing a chairman, treasurer and secretary. It was now in a position to make approaches to the Department of Economic Development and the local council for funding. The DED agreed to fund 90% of the salaries of two full-time workers under the Action for Community Employment (ACE) scheme. The Council contributed a one-off grant and further contributions during the year came from the Northern Ireland Voluntary Trust, the Western Education and Library Board and private donations.

The Derry Open Learning Group represented no particular ideological viewpoint. The cohering factor was a shared interest in extending the learning opportunities for adults in the Derry area. Some saw the service as complementary to the traditional education system and had more interest in the provision of information about existing courses and the extent to which LEARNING LINKS could help remove some of the barriers encountered by adults seeking a return to study. Others focused their interest on the degree to which such a service could help fill the gaps in provision and cater for the needs of individual students via self-help groups, learning exchanges and the creation of new tutored classes. There was no perceptible conflict among the group as to the aims and objectives of the LEARNING LINKS as it was thought that the service could operate satisfactorily on both the aforementioned fronts, depending on the perceived demand.

IMPLEMENTATION

1 Pre-Service Developments

As already stated, it was envisaged that the LEARNING LINKS Centre would operate on two fronts: information dissemination and outreach activity aimed at stimulating the development of self-help groups and learning exchanges. These were not seen to be mutually exclusive tasks as demand for alternative modes of learning might emerge from the requests for information in subject areas, the study of which was not adequately catered for locally within the traditional education system.

In September 1984, an outreach worker and an Information Officer were appointed. The latter had some experience in adult education as a tutor of Adult Literacy as well as typing experience which was essential for using the word-processor. The former had been a mature student, returning to study at the age of twenty-six. Among his qualifications was a Postgraduate Diploma in Continuing Education. Both were on one-year contracts, a fact which was likely to influence developments at this Centre (1). Although the Outreach Officer and Information Officer labels implied a strict delineation of duties, this was not in fact the case. Overlapping of functions was made necessary because of the unfamiliar nature of the work and the fact that the 'information' side of the service was the most time-consuming and the most in demand.

It was decided that the chairman of DOLG would function as 'link-man' between the Open Learning Group and the staff. Labels were avoided but essentially his role was that of supervisor. The CET Development Officer was to have responsiblilty for staff training and was to monitor and develop the operation in line with the purposes of CET.

In October 1984, the staff of Gillingham, Portsmouth and Derry LEARNING LINKS Centres were invited to Newmarket for two training days organised by CET. The CET Development Officer visited Derry late in 1984 and on three occasions during 1985, when further training was given. The early training proved useful but more was needed, especially in the area of counselling skills.

The period from mid-October 1984 to the New Year was largely occupied by the collection of information on classes, courses, clubs, societies and organisations that operated locally. This information was supplemented by details of distance learning opportunities which were supplied by CET. In the course of collecting this information, staff took the opportunity to introduce themselves and explain the service to as many individuals, groups and institutional bodies as possible. By the time the sevice opened to the public on 2nd January 1985, a substantial data-bank had been accumulated and a considerable list of contacts, with whom staff hoped to work in the future, had been established.

(1) Staff appointments: October 1984 - 2 full-time staff
July 1985 - 1 additional full-timer
October 1985 - Replacement for 2 full-time ACE workers

2 Public LEARNING LINKS Service

The opening hours of the LEARNING LINKS Centre were 10.00am to 12.00 noon and 2.00pm to 4.00pm, Monday to Friday. This necessitated one worker being in attendance at the Centre at all times.

As information up-dating is a perennial and time-consuming aspect of the LEARNING LINKS service, this was approached as systematically as possible, given the lack of familiarity with the work. At first, approaches were made to the traditional providers of adult education, ie Magee College, the North-West College of Technology and the WEA. The response was generally helpful although the disparate and extensive nature of provision within the North-West College made this a particularly difficult source to tap. There was nowhere within the institution that centralised the type of data LEARNING LINKS required. Prospectuses were often vague and inaccurate, a typical example of the types of problems facing adults searching for suitable courses.

The Amenities Office of the local council was approached for a list of local agencies, voluntary groups and community associations in the city. These were then contacted for details of activities which might be appropriate for prospective enquirers at the LEARNING LINKS Centre. The local newspapers were also scoured for details of current activities organised by local agencies. In this way, a fairly comprehensive list of the local providers of learning opportunities, both formal and informal, was compiled.

During 1985, the LEARNING LINKS Centre received 241 requests for information. Approximately 170 of these requests were received at the office itself. The remaining 71 were received at the various out-centres which staff attended throughout the year. Of these, 130 enquiries were from women and 111 from men. The ratio of unemployed to employed was 8:1. The Waterside area was under-represented, with only 36 enquiries from that district.

Enquiries were often of a disparate and comprehensive nature. Of those received, only 57 were requests for information on hobby/recreation type activities specifically. Most other requests contained at least some element

which indicated that a major motivation was 'getting a job'. Among the most recurrent request subjects were: Youth and Community Work, Languages, Computer Training, Dress-making, O Levels.

The approach of LEARNING LINKS staff to clients was generally informal. Often, new areas of interest would reveal themselves during these 'chats'. However, they never perceived themselves as counsellors. In their view, they did what they could to meet the demands made by clients. In many cases, this meant providing a general back-up service, ie providing information on grants, arranging interviews, supplying application forms, etc.

The area in which they felt to be weakest was in the stimulation of informal adult learning activities and other outreach and network activities. They felt that reasons for this might include:

(a) Too much attention paid to the 'information' side of the service

(b) Lack of full commitment by staff in a temporary job situation

(c) A sense of 'isolation' in a new field

(d) A general vagueness associated with the 'outreach' concept

(e) Indeterminate target groups

(f) Reluctance by other agencies to use a 'new face'

(g) General apathy among enquirers towards self-negotiated learning - probably stemming from the same lack of confidence that brings them to the LEARNING LINKS Centre rather than directly approaching other agencies.

Despite the above, they did feel that they managed to heighten the profile of LEARNING LINKS considerably. By the end of their tenure, links with a number of local agencies had been established. Through the usual publicity channels (radio, newspapers and leafletting), they had become accepted members of the local family of community/voluntary groups.

THE ROLE OF INFORMATION TECHNOLOGY

Any service which uses computers will usually present itself to the undiscerning as something more substantial than a service using the more traditional office system. This in itself can be a bonus. The client may gain confidence in a service which has taken pains and seems to have the expertise to employ the latest technological developments. And, of course, the computer does have manifold uses. Staff found the word-processor especially useful. Prestel is also a useful but expensive service and the Torchmail expedites the transfer of information, etc between the various Centres. However, it did not seem that the computer was <u>essential</u> to the existence of the LEARNING LINKS Centre. Staff felt that the amount of information required could more easily have been collated and disseminated through a traditional filing system. In fact, such a system had to be compiled as a prelude to computer entry, thereby multiplying the work-load. Access to information on the computer was not simple enough to encourage independent client-usage, although this will no doubt be developed in time. Independent client-usage, too, is an impersonal

activity in a service which should have the 'personal' approach as central to its ethos.

Nevertheless, both staff in post during 1984/85 and those appointed as their successors believe that, with proper local training, broader future developments and the long term endurance of the LEARNING LINKS Centre, the computer will prove better to have than not to have.

CONCLUSIONS FROM EXPERIENCE TO DATE

1 Consideration of Factors Affecting the Derry LEARNING LINKS Service

(A) Location

Since beginning this report, a new location has been found for the LEARNING LINKS Centre. It was felt that in the previous location the LEARNING LINKS Centre was somewhat smothered and that it had also inherited some of the problems of the Unemployed Workers Group. The new location is in the town centre but is, unfortunately, in a first-floor site. This may have an effect on its capacity to attract would-be clients.

(B) Operational pattern

A degree of overlap in staff roles would seem a more expedient and pragmatic measure, allowing for a greater degree of mutual support and stimulation, than clearly separated duties. This pattern of operation developed during the first year due to the tasks identified as the service became fully operational.

(C) Management arrangements

Essentially, the Derry Open Learning Group plays a very limited role in the day-to-day running of the LEARNING LINKS Centre. Effectually, only the Chairman and Treasurer have taken responsibility for the mangement of the service. The future role of the DOLG needs radical re-appraisal as staff felt it served no significant purpose. Conflicts often arose over the degree of autonomy afforded the staff in decision-making.

(D) The role of Information Technology

As stated, the computer database did not prove to be essential to the service and at times was, in fact, an encumbrance. A lack of expertise, recurring technical problems and the laboured process of data-entry proved exasperating and there was a persistent temptation to ignore the computer and work directly from files.

(E) Ability to enable clients to make informed choices

The best arbiter is always the client himself. LEARNING LINKS can provide him/her with suitable information in a pressure-free atmosphere but, without expert counselling skills, staff felt that it was not advisable to try to 'direct' the client.

(F) Ability to stimulate and support informal adult learning

This aspect of the service proved weak. Part of the fault may be with the staff. It is imperative that suitable staff are selected for this task. Unfamiliarity with available resources, apathy, a lack of confidence on the

part of clients, a distrust of unconventional ideas and a need to be 'validated' by a traditional institution, all mitigated against success in this area.

2 Transferable Lessons from the LEARNING LINKS Work

(A) Anticipated and non-anticipated responses by clients, agencies and the community

It was generally anticipated that such a new service would need time to make itself familiar to the community. This proved to be the case. Only towards the end of its first year, after a publicity effort and many approaches to various agencies, did LEARNING LINKS staff feel that people knew about them. Vagueness about outreach targets initially caused concern but eventually staff were satisfied that the information side was, at least, a qualified success.

Agencies and individuals seemed reluctant to take on board the notion of self-negotiated or informal learning. Staff had assumed that this would be the case and much thought and work is necessary in this area.

Most of the enquirers still saw 'education' as an aid to getting work. This obviously reflects the current dire economic situation and was not unexpected. Enforced leisure is still a luxury that most unemployed can ill afford.

(B) Staff development needs

A team approach seems best suited to tackling the problems encountered in efforts to stimulate informal learning. At the time of writing, application has been made for a further three part-time ACE workers in addition to the three full-time staff in post for 1985/6. If successful, this should prove of great benefit to the service.

Teamwork provides mutual support, stimulation and enthusiasm. ACE jobs, although necessary at present, are not a very satisfactory means of staffing a service such as LEARNING LINKS in which continuity and committment are all-important. Staff would obviously benefit from more comprehensive training in computer operation and programming as well as counselling skills. The ACE scheme mitigates against this but some consideration should be given to other LEARNING LINKS models to find out if it would be possible to get finance for permanent staff.

(C) Resources needed

Obviously there is a need for more secure and permanent financing. This would allow for the staff developments implied above and overcome the 'penny-pinching' that is currently necessary. However, the LEARNING LINKS Centre is at present adequately equipped to tackle the job in hand. This is not to say that better office equipment, a bigger and better office and access to other facilities such as reprographic machines would not be desirable. They would, as would continued access to the expertise of CET and other agencies involved in this type of work. However, while these may not be readily or always available, the experience of the last 15 months has shown that the service as it stands is viable in fact and in aspiration.

3 The Future of LEARNING LINKS

There is no doubt that there is a need for a service like LEARNING LINKS. Two hundred and forty-one people are one argument to support this. The service can now claim to offer fairly comprehensive information on the bulk of the learning activities in the Derry area. As time goes on, the gaps that do exist are likely to be plugged. The 'information' side of the service seems both necessary and secure.

The 'outreach' side of the service needs much thought and work. There seems little doubt that a need exists for learning opportunities to be made more accessible and to be extended. The role of the LEARNING LINKS Centre should be to transform this need into demand. Passivity will not achieve this. Nor will a non-systematic, pin-stabbing approach. It may be necessary for LEARNING LINKS to channel all its outreach resources into small, local areas if it is to make its presence really felt. This 'saturation' approach may reveal the real need and will also have the bonus, if co-operation with other local groups/providers is maintained, of establishing the close links with other agencies that have always been a prime objective of the service. The 'domino' effect could eventually result in LEARNING LINKS having the potential to make a significant impact throughout the city and place it in the position to which it has always aspired - the educational entrepreneur, the middle-man.

P O'Hagan, LEARNING LINKS Outreach Worker 1984/85
December 1985

Negotiations for developing this Centre started early in 1984. They came about through the interest and vision of someone who was concerned about his own students who, after completing their term at a Community Workshop, were left with few options for continuing learning. On the face of it, this Centre has not fully achieved the aims of LEARNING LINKS as it had great difficulty in setting up informal learning activities. However, given the constraints under which this project had to operate, it is not altogether surprising that this was so. This development requires a much more long-term effort in a location which suffers from severe political and social problems which have resulted in considerable apathy amongst the unemployed.

Factors influencing the LEARNING LINKS developments in Derry

The fact that one individual, not an institution or other educational body, contacted me was in some ways an attraction, since it freed possible future work from labels which might have become a hinderance in Northern Ireland. I had anticipated some possible problems in setting up an information service for adults in the Province because of established work in related fields. However, in order to ensure good local support, I did not go ahead until an inter-agency development group had been formed.

The DOLG was extremely effective in negotiating funds and premises for the work and was ready to appoint staff within a few months of its formation. In fact, all the preparatory arrangements were taken care of locally, albeit by two or three members of the DOLG only.

Since there was an existing educational guidance service situated in Belfast but with a brief to serve the whole Province, I had been looking for a location that was not within close proximity of the capital. Derry is the second largest city in Northern Ireland and it seemed appropriate to locate a service there. I had also hoped that earlier successful community education work in this city would provide good foundations for informal learning activities in Derry and an interest in this type of work.

Strengths of the Derry LEARNING LINKS service and contributing factors

As is evident from the case study, this Centre focussed firmly on information provision and did not attempt to provide a counselling service. The Centre certainly aimed to have up-to-date local information across a wide range of provision, although the informal side was in fact less well represented. The Derry Centre was the first to service its own databanks and staff were most efficient in computerising data. The lack of call for this information was discouraging for them as much effort was invested in keeping it updated.

The back-up service provided by the Belfast EGSA, for individual client counselling and non-local information, was a great bonus. This was of special value to a project with an annual turnover of staff. New staff could concentrate on local matters in the knowledge that other types of enquiries could be referred effectively.

Although the neighbourhood survey carried out by LEARNING LINKS did not lead to informal neighbourhood activities, it was valuable in helping staff to understand more fully the problems associated with undertaking LEARNING LINKS work in Derry.

The interest and support of the WELB, both at headquarters and through the local library, will ensure that LEARNING LINKS in Derry develops as part of an overall strategy for the area. The independence of the DOLG and its determination to make LEARNING LINKS work in Derry will safeguard the original aims of the project.

Constraints of the Derry LEARNING LINKS developments

I have already stated that the problems facing this service were considerable. The case study refers to the political divide of the city. It also outlines the difficulties associated with short-term staff appointments.

While the DOLG was fully aware of the drawbacks of using ACE workers, it had no other options if it wanted to go ahead. Ways of obtaining some permanent staff have been discussed but their appointment seems unlikely in the near future.

Lack of a cohesive network across local agencies made it difficult for an inexperienced outreach worker to achieve real progress in a short time. He did enlist the co-operation of individual bodies, such as Dove House, but did not generally find the collaborative spirit needed to make the work succeed.

The DOLG includes individuals and representatives from a variety of backgrounds and agencies. It was hoped that this would form the nucleus for building up a local inter-agency network. For a number of reasons, this did not happen and staff did not benefit from the necessary active links which this group might have provided.

Funding was adequate for the work but access to additional resources might have encouraged staff to try other (and possibly more expensive) ways of approaching information provision and outreach.

In locating the Derry LEARNING LINKS Centre in the Centre for the Unemployed, I had hoped that it could become an integral part of the work of this host agency, especially as it was already offering some other advice services. I believe the opportunity to make this happen was missed by the Unemployed Workers Group, possibly because it was in a phase of transition and uncertainty in 1984 and early 1985. The traffic in this Centre was slow and the number of potential LEARNING LINKS clients within its user group was soon exhausted. Access to the Centre was not ideal and it is therefore understandable that the LEARNING LINKS service was moved after its first year of operation.

Conclusions

This service has not as yet 'found its feet'. It is not well enough known nor fully accepted by its own community. Its present location may or may not turn out to be a success. In my view, it would be desirable to make LEARNING LINKS an integral part of the local library service, once this has moved to a bigger and more central location.

In order to make the most of the information available, LEARNING LINKS will need better links with local agencies (formal and voluntary), both for referral of clients to the service and effective referral of enquirers. Closer involvement of WELB should give the service the local credibility it needs. Extensive outreach will be an essential long-term task.

The Derry developments have made some important contributions to the LEARNING LINKS work: experience of working with and through voluntary groups (DOLG and UWG); building bridges across some existing divisions (Derry/Belfast; Catholic and Protestant enquirers use LEARNING LINKS, a British agency operating in Derry).

Given close liaison with its Scottish and English counterparts and consistent local strategies for the service, this Centre should in time find ways of serving the local community and of initiating informal learning activities.

Dorothea Hall,
January 1986

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Appendix 1

Analysis of 50 responses (from 170) received from Derry LEARNING LINKS clients.

	Number of responses
1. What were you enquiring about?	
- a particular interest or subject	29
- how to go about learning/studying	13
- qualifications	8
- where to find a particular course or other learning activity	28
- what you should do next	11
- something else	6
.....	
2. What made you come to LEARNING LINKS for help with your enquiry?	
- referral by another agency	5
- referral by Job Centre staff	1
- publicity leaflets/posters	21
- talks on the radio	5
- because you had met LEARNING LINKS staff	21
- other reasons	6
.....	
3. Were LEARNING LINKS staff able to provide suitable information or guidance?	
YES	39
NO	13
If you answered YES, please complete the section below:	
Were they able to help by	
- giving you details of local learning activities?	16
- giving you details of learning activities elsewhere?	9
- referring you to other agencies?	7
- putting you in touch with other people with similar interests?	5
- contacting a college on your behalf?	13
- giving you other help?	6
.....	

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If you answered NO to question 3, please complete this section:

Why do you think staff were unable to help?

- because LEARNING LINKS did not have the information	7
- because LEARNING LINKS staff did not fully understand your enquiry	0
- because LEARNING LINKS staff did not spend enough time with you	0
- because there were no learning activities available to suit you	4
- because you weren't really sure what you wanted at that time	4
- for other reason	3
.....	

4. Did you act on the information and guidance given to you by LEARNING LINKS?

YES	32
NO	13

If you answered YES

Was the outcome satisfactory for you?

YES	25
NO	6

5. Would you go back to LEARNING LINKS for further information and guidance if you wanted help with learning activities in the future?

YES	45
NO	3

Would you be willing to be contacted by someone to talk about your enquiry to LEARNING LINKS?

YES	36
NO	14

If you are able to help, please complete the section below.

Name: Telephone:

Address:

Thank you for your assistance.

APPENDIX 2

Client Case Study 1

Chris first visited LEARNING LINKS in February. She is about thirty years of age and is the owner of a local hairdressing salon. Chris has no hairdressing qualifications at all and is worried by the fact that some of the girls working for her are better qualified than she is, at least on paper.

Before coming to see us she had enquired into the hairdressing courses available in town and had decided that the two year City and Guilds course run at the local Tech would suit her best. However, on discovering that most of the students were between 17 and 21, she felt too embarassed to pursue her application.

She came to us wondering if there was any course aimed at an older age group. There wasn't. I then rang up the course organiser of her original choice and asked if there would be any objection to Chris enrolling. I was told no but that older students who were married, etc could not expect any leeway if these commitments should lead to bad timekeeping, etc.

Chris has now enrolled for next September. She has been further encouraged by the fact that we have had another client with a similar problem who has now decided to enroll as well.

Client Case Study 2

In March, I was invited to meet with the Waterside Gingerbread Group at the family day centre on the Gobnascale Estate, in Derry. I explained to the group the function of the LEARNING LINKS Centre. I was anxious to communicate the fact that the group structure, which already existed within the Gingerbread Group, might prove suitable as the basis of a self-help study group if there were areas of mutual interest or shared problems. This was particularly relevant in this case since, being one-parent families, they mostly had difficulty in getting free time to participate in other activities throughout the city. Having detailed the support which we might be able to provide (ie monitoring initial meetings, introduction to other possible sources of aid, etc), I left them with this idea but, as yet, they have not taken it up.

I was able to facilitate the group in other ways. They were anxious to know more about Welfare Rights so I arranged for a talk to be given on the subject by Mr F from the Welfare Rights Office at the Unemployed Centre. This has had a further spin-off in that Mr F is helping the group with their campaign to acquire more suitable accommodation from the Housing Executive.

Several individual members of the group wished to do courses. They were provided with the relevant information and were particularly pleased when I informed them that the Unemployed Centre now provided child-minding facilities. A further member was also facilitated when the Dove House administrator agreed a dressmaking course at the Centre.

The Gingerbread Group also asked me to contact a social worker for them. They had been invited to take part in a local exhibition but none of the group felt that they had the requisite knowledge or communicative skills to man an information stall in the local Town Hall. I have arranged for RD, a senior social worker in the Waterside, to accompany the group at the exhibition.

I feel that, based on these experiences, a rapport has been established between ourselves and the Waterside group. Because of this, we should reap certain benefits. They should not be hesitant about contacting the LEARNING LINKS Centre if they feel we can be of any help. I will, of course, contact them occasionally to remind them that we are still interested. Hopefully, their experience will mean that any reports they make about the LEARNING LINKS Centre will be complimentary, thus encouraging others to contact us.

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LEARNING LINKS CASE STUDY 4 - STORNOWAY CENTRE

SCENE SETTING

1 The Local Context

Stornoway, on the Isle of Lewis, is the main retail, commercial and administrative centre in the Western Isles, which lie about 40 miles off the north-west mainland of Scotland. Extensive use is made of mobile shops and mail order firms. Telecommunication is obviously of great importance.

Relative to mainland Scotland, the Western Isles have more young people, less working age people and more elderly and very old.

Self-employment is an integral part of the economy; fishing and tweed weaving, the major contributors, and steel fabrication, the construction industry and the public service sector provide the main employment opportunities. Craft industries and tourism offer limited or seasonal employment and crofting is often a necessary part-time addition to help families cope with the cost of living. However, career or job prospects for the well and poorly qualified school leaver are limited. There is less long-term and youth employment than in Scotland as a whole.

2 Origin of the LEARNING LINKS Developments

The Isle of Lewis was chosen for this latest LEARNING LINKS development for a variety of reasons:

(a) It included Scotland in the CET LEARNING LINKS project

(b) It offered the opportunity to study the use of LEARNING LINKS in an isolated rural community with its own unique traditions and problems

(c) It could be built on to an existing, but relatively new, local viewdata system installed in schools and thus extend this to the adult community

(d) As a library provides a service to individuals, the needs of the individual enquirer/learner would be kept to the fore.

Initial negotiations took place with the Local Education Authority, the Community Education Service and the Library Service. SCET was consulted for technological expertise, NETWORK for information resources and informal learning contacts. By February 1985, LEARNING LINKS Stornoway was agreed, with the proposed starting date of June 1985.

IMPLEMENTATION

1 Pre-service Developments

An inter-agency steering committee was established, with representatives from the Community Education Service, the Library Service, BBC Local Radio, Lewis Council for Social Service, Health Education, Highlands and Islands Development Board, FE sector, the Open University, Local Education Bi-lingual Project and Education Department - Computer Development Service.

It was hoped that Community Education would provide details of the formal provision of learning opportunities and activities, and that library staff, once trained by CET in the use of computers, would gather information on informal groups of all kinds, to be recorded on disc. Library staff would also have to be made aware of the attitudes of adults to learning, of how to handle enquiries and direct people to choices and of when referral to other agencies would be the best solution.

Training sessions covering these areas were conducted during April and June, with a follow-up session in September. The steering group held its first meeting in September.

The Depute Director of NETWORK visited in June 1985 to describe the role of NETWORK Scotland (broadcasting support and educational information service), what it would offer LEARNING LINKS Stornoway as a central, national back-up for the local service and also what it might offer as examples from its own development which could be attempted or emulated locally. A return visit was made in November 1985 to discuss progress.

The library staff had received a micro with single disc drive in 1983 from the LEA but had done little with it. The CET project, which brought extra equipment, increased the potential for using hardware already held and acted as the catalyst they required to get over their own individual 'blocks' about using new technology.

They worked with a prepared disc on Open Learning opportunities, which was a useful tool for familiarisation with using the computer. Another local disc, compiled by Community Education Service, served as an initial database on local informal activities, so library staff are adding to it from the information they have gathered on local interest groups, sporting clubs and support groups.

This was collected:

(1) By sifting through back issues of the 'Stornoway Gazette' and noting reports or notices of activities

(2) By distributing forms (in Library and Mobile Library service) to be be completed by anyone involved in an activity - a poor response

(3) By speaking to people using the libraries, in some cases 'nailing' a key person who had extensive local knowledge or contacts - this was the most successful method.

The library staff were amazed by how much was going on, especially in welfare support and play groups; also, more was going on outside Stornoway than had been imagined.

However, many people were uneasy about information going on a computer. They claimed that, though they put up posters and inserted notices in the local newspaper, advertising a group and including their own name, address and even phone number, they were not 'well enough organised' to be recorded on computer.

2 Public LEARNING LINKS Service

The service went public on 30th September 1985. So far, only a few enquiries have been satisfied by the use of the computer, eg a lady who wishes to write stories has now enrolled on a correspondence course. Other learning enquiries

have had to be answered by using other strategies, including reference to the Directory of Open Learning Opportunities in Scotland and contacting NETWORK (1). Extensive use of the Open Learning Directory is a direct result of the total cancellation in 1985/86 of all traditional evening class provision by the local education authority. During the past 2-3 years, classes had had to be self financing, so provision was depleted anyway. In 1985, even this arrangement was in doubt and a very late (September) announcement was made that none would be offered.

The disc compiled on informal learning activities has revealed other gaps in local provision, for example in drama and choral work. The library and Community Education staffs therefore hope to co-operate in identifying local needs and in meeting demands as far as possible. They anticipate that lack of resources may cause problems but hope that there will be enough flexibility to initiate and/or support activity in any case. The most useful potential of the computer appears to be matching up interests with activities. For example, lots of people regularly borrow books on coin collecting but there is no coin collectors' club. 'Request and offer' could be developed here.

The library is at present a construction of wooden huts, with even the siting of bookshelves being determined by the structural limitations of load-bearing floors. The LEARNING LINKS 'corner' is literally that and the computer is tucked into a tiny space which is NOT designed to attract attention, though it might be said to offer privacy to any tentative enquirer bent on accessing information for him/herself. Most people who have made enquiries have asked staff to use the computer for them because they want the answer immediately and are not prepared to spend time on their enquiry. The library staff believe that the present school generation will display no such hesitation when LEARNING LINKS may become relevant to their needs.

As yet, very little publicity has been undertaken. Notices in the library do point out the LEARNING LINKS corner but lack of time free from other library duties and a reluctance to advertise while there is still little to offer have resulted in a very low-key approach. However, plans have been sketched out for posters or hand bills to be distributed in mobile libraries, council offices, post offices, Job Centre, DHSS, shops, garages, bus stations, ferry and air terminals. The local paper could carry an announcement, better still if accompanied by a feature article of the 'human interest' variety. Local radio (Radio Nan Eilean) is only Gaelic speaking so that, less immediately, local Radio Highland would have to be used because a large number of enquirers are the English speaking 'incomers' (2). Such outreach work demands time - to go out and make contact, to negotiate interest and collaboration.

The local Rotary Club plans to produce a 'What's On' monthly listing of events, mainly to avoid double booking (eg two coffee mornings scheduled for the same day, thus restricting each other's volume of support). Co-ordination of information provision is being looked at with this and other agencies. The few remaining Community Education activities, such as local history lectures, could also be recorded on the computer and advertised by the Library Service. A recently formed Unemployed Workers Group are researching activities available and in demand among their clients. They are also aware of LEARNING LINKS and are collaborating on acquisition and exchange of data and publicity.

(1) This directory is compiled annually by SCET. In 1985 it was on disc.

(2) The LEARNING LINKS software (database and guidance program) uses English. A translation into Gaelic was not considered necessary. All publicity materials are also in English.

3 The Future of LEARNING LINKS, Stornoway

The library staff so far involved in the project would like to see it continuing. It has been a valuable learning experience for them and they would be disappointed if it was not developed further. Indeed, they have a sense of responsibility for it and for the public, who should not be expected to show interest in it on command, only to find it has ceased to exist at the moment when it just might have been a valuable resource for them. The other members of the library staff so far not involved should soon be trained by their colleagues, in order to avoid feelings of exclusion and particularly in order to spread the load of updating information.

Being very much alive to the giving of information as a library function, the staff are anxious to make the library a clearing house for information. They know that outreach work is vital; nothing is inhibiting them except the time required to do it.

Staff shortages cannot sustain further depletion when one member goes out to make local contacts or spends several hours at the computer and away from the public service area.

They caution that, though their personal commitment to LEARNING LINKS exists quite firmly, it must not be taken for granted because it is an addition to their regular workload.

CONCLUSIONS

LEARNING LINKS Stornoway seems to have reached a stage where it requires support which is of a practical value to the library staff who run it. Because they are so restricted in time, assistance in the collection of information must be offered by members of the steering committee personally undertaking some research and publicising the service by personally contacting useful outlets.

Community Education, though hampered by lack of funds, is nevertheless a community-based service and should help facilitate any learning need expressed to library staff by enquirers. There are many distance learning developments in Scotland which would be appropriate for the Western Isles and these have a pool of expertise which would be available for consultation. The disc 'Open Learning Opportunities in Scotland' should be provided by SCET. NETWORK will continue to provide a central supporting service and may undertake some of the practical tasks of producing publicity material. In this way, NETWORK is treating LEARNING LINKS, Stornoway as another of its 'outposts' - providing a local information service which complements NETWORK's central service.

Sources: Western Isles Islands Council Report of Survey
Shell Book of Islands

Anne Docherty, Depute Director, NETWORK
December 1985

This Centre was the last to be developed, although negotiations with national Scottish agencies took place in early 1984. There are two reasons for this: 1) The first plan for setting up a LEARNING LINKS Centre in Scotland on the mainland was abandoned as I did not think that conditions in the particular location were suitable. 2) Negotiations in the Western Isles and implementation of the LEARNING LINKS service were deliberately kept at a slow pace in accordance with the wishes of Community Education staff, in order not to do too much too soon and therefore spoil the long-term chances of LEARNING LINKS in this location.

It is, therefore, difficult to provide a full evaluation of this service, since its public function has been in existence for three months only and there is, as yet, little data on the work of the service.

Factors influencing the development of LEARNING LINKS in Stornoway

From the beginning of the LEARNING LINKS project, it was envisaged that a library would become host to a LEARNING LINKS service. Other possible library locations had been investigated but a number of factors made Stornoway an attractive proposal.

A development in the Western Isles not only balanced the urban settings of the other three Centres and therefore provided an opportunity to think through the needs of a rural community, but it also met the CET requirements for developing a Centre in Scotland.

The fact that local education staff were already involved in developing computer applications for community education was undoubtedly a major factor in the decision to go ahead. LEARNING LINKS was to explore ways of serving adults while the existing facilities, in particular a local viewdata system, were aimed at schools. This also meant that local technical expertise was available, an important consideration in view of the geographical location.

Lack of existing provision for adults, or at least perceived lack, seemed to offer the potential for new developments. LEARNING LINKS in Stornoway was implemented at a time when all funding for adult classes by Community Education had been withdrawn. However, Community Education staff were keen to support new initiatives in any way they could.

Strengths of the Stornoway service and contributing factors

This service is an example of the originally envisaged model for LEARNING LINKS Centres, ie a service fully integrated into the work of the host agency. While the earlier LEARNING LINKS Centres had built into them the potential for becoming fully integrated, this Centre was developed by starting from this position. In part, this was due to the work I had carried out through the other Centres and the lessons learnt during the first year of the LEARNING LINKS project. Mainly, of course, it was due to the host agency itself, where library staff were prepared to extend their role by taking part in a pre-service training programme and by taking on responsibility for the various tasks involved in offering a LEARNING LINKS service.

The Stornoway Centre certainly benefited from the experience of the earlier Centres. Most of the technical problems were either known or had been

overcome, information collection had been tested and systemised, training could be based on real experiences and so on. In retrospect, it seems essential that such experience is available when working with staff who are already fully occupied by their library duties. In terms of the overall national LEARNING LINKS developments, the Stornoway Centre is significant because it demonstrates how an existing agency can be enabled to extend its role and take on a LEARNING LINKS service.

At the time of writing, the LEARNING LINKS Steering Group in Stornoway has only met twice. The reason for including it as one of the strengths of this Centre is because of its inter-agency nature. It has brought together individuals and agencies who might not otherwise be involved in a joint venture. This group is likely to prove to be an important catalyst for strengthening the local network.

From the very beginning, close links were developed with NETWORK. The expertise and support afforded to staff by this agency has not only encouraged them in their work but is also an essential element of the service itself. NETWORK can offer back-up where this is needed and will ensure that staff at Stornoway will be made aware of information and developments relevant to their work.

Constraints affecting developments at Stornoway

From my point of view, the slowness of this development, already referred to above, was a major constraint in achieving the aims of the LEARNING LINKS project. Negotiations began in late summer 1984. The public service started in October 1985. Staff at that time were able to maintain and operate the database and to use Prestel but it was not seen as desirable to introduce word-processing facilities with the result that Torchmail and other applications could not be used. The guidance program, however, was installed at this Centre.

As is evident from the case study, time constraints for library staff were causing tensions. This is almost inevitable when staff who are already fully occupied by existing duties take on additional work. These difficulties were addressed by all those involved in order to find an acceptable working pattern.

In early 1985, a workplan for information collection was negotiated with Community Education staff. For a number of reasons, this was only partially carried out. To date, no satisfactory strategies have been arrived at and this has been a major concern of library staff.

When this Centre was first negotiated, there were hopes that the library would move to bigger premises. This did not happen, with the result that even the 'LEARNING LINKS corner' is a real sacrifice in terms of available space.

Conclusions

The Stornoway Centre has laid good foundations for its LEARNING LINKS Service. Its long-term future should be assured as an integral part of the library service, where staff deal with enquiries as part of their overall workload.

Strategies for reaching out into the community, be it through mobile libraries or the local radio, have to be developed. The local agencies involved in the

LEARNING LINKS Steering Group will be a significant element in establishing an effective local network for such work.

The involvement of community education in managing and supporting this service is valuable, particularly in relation to ensuring adequate practical support and additional resources as and when these will be required. This development demonstrates what can be achieved when local bodies collaborate with each other and with national agencies.

Dorothea Hall,
January 1986

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APPENDIX 1

Client Case Study 1

Anne is married with two pre-school children. She called in at the library and requested information on correspondence courses in chiropody. After an initial discussion to establish the nature of the course and whether or not it had to be home-based, the keyword list to the Home Based Learning disc was checked under likely terms. None were found. The SCET Open Learning Opportunities in Scotland was consulted. Only a refresher course was listed. British Qualifications was then consulted which listed college based courses and the addresses of the two main chiropody associations. These were provided to the enquirer with a promise that library staff would pursue the matter further.

That afternoon, NETWORK in Glasgow were contacted by telephone and the nature of the enquiry explained. NETWORK promised to call back the following day. They searched their own files and contacted the two chiropody associations, reporting back on the restrictive nature of correspondence in terms of possible practice and suggesting that the original enquirer should consult some of the Sunday papers which often carried advertisements for such courses. Early the following week, they in fact phoned back details of specific courses. On both occasions, library staff contacted the enquirer by telephone with the information provided.

Client Case Study 2

Barry is 18 years old and only recently left school but required to take 'O' grade Maths and Higher grade English. His mother asked for details of courses during her regular library visit. (No local authority evening classes existed during the year in question.) Details of courses were promised by post. The SCET Open Learning list was consulted but, because of the wide range of options, it was recommended that Barry visit the library to consider the choices. It was his mother who took notes of the various options on her next visit to the library. Library staff were unable to establish whether Barry actually wanted the information or was having pressure or guidance from parents.

Client Case Study 3

David asked in the library who could be contacted as his son wished to learn karate. The local activities disc was accessed and a printout of the local karate club details was provided on the spot.

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APPENDIX 2

Comments reflecting the experience of the Stornoway LEARNING LINKS service during the early part of 1986

Most enquirers seek information with little or no knowledge of LEARNING LINKS. On the whole, it is the library staff who make the most use of the facilities to satisfy any request for information. We find the databank of local activities particularly useful compared with the card index system which we used in the past. We also feel that the databank on home-based learning opportunities has added a useful new dimension to the information we can provide for clients.

As public awareness grows, it is hoped that the public will explore the wider aspects of the service. However, developments are purposely kept at a slow pace and it will take some time before the service is well known in the local community. This applies both to the information provision and the use of the self-assessment program which has not as yet been widely publicised. It appears significant too that the bulk of enquiries come from women.

At the present time, more data on locally available informal learning activities is being collected. Close links with NETWORK are being maintained.

R Eaves, Librarian
April 1986

GLOSSARY

ACE	Action for Community Employment
ALBSU	Adult Literacy and Basic Skills Unit
BBC	British Broadcasting Corporation
CET	Council for Educational Technology
DATEC	Design and Arts, Technician Education Council
DED	Department of Economic Development (Northern Ireland)
DES	Department of Education and Science
DHSS	Department of Health and Social Security
DOLG	Derry Open Learning Group
ECCTIS	Educational Counselling and Credit Transfer Service
EGSA	Educational Guidance Service for Adults
FEU	Further Education Unit
KCC	Kent Couny Council
MSC	Manpower Services Commission
REPLAN	An initiative by the DES for the unemployed
RUM	Recreation for the Unemployed in Medway
SCET	Scottish Council for Educational Technology
UDACE	Unit for the Development of Adult Continuing Education
UWG	Unemployed Workers' Group (Derry)
WEA	Workers' Educational Association
WELB	Western Education and Library Board

Section 3

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Introduction

As previously mentioned, LEARNING LINKS had as one of its main aims the brief

> 'to test the usefulness of the microcomputer in an information service for adults'.

While this was the overriding aim with regard to applications of Information Technology, it should be noted that the new technology was also regarded as having a role in relation to the other two aims. In setting up LEARNING LINKS we therefore also asked such questions as

> How can the microcomputer assist student-negotiated learning?
>
> How can the microcomputer be used to stimulate and support informal adult learning?

In 1982/83, the time when ideas for the CET Information Centres' project were developed, relatively little was known about the real capacity of small computers. It was therefore seen as important to launch work which would provide some data on the usefulness of these machines in settings where the public would have direct access to the equipment.

By 1985, a number of projects were under way using microcomputers to provide information on education and training for adults. In particular, ATEB, an MSC funded project in Wales, was exploring ways of providing such information on a regional basis. Other projects, such as MARIS for the Open Tech, were moving from micro to mini computers. Work was also in progress on mainframe computers and, by the time LEARNING LINKS was launched, a major DES initiative (ECCTIS) was engaged in setting up a national databank on courses leading to recognised qualifications. By 1985, ECCTIS could be accessed on Prestel, where courses in further and higher education could be found. Subsequently, information on non-advanced courses was also collected following the successful completion of a pilot scheme in the South-West of England. LEARNING LINKS took into account these and other developments and decided to concentrate its information provision on local learning opportunitities for adults, except where nationally available provision could be taken up in one's home location, eg through educational broadcasts for adults.

During 1985, another national development was taking place. The UDACE was investigating the role of the new technology in relation to possible applications for educational guidance for adults. LEARNING LINKS was able to contribute to these investigations and to the UDACE Technology Report because of its experience in setting up local databanks and through the development of an interactive guidance program. Of particular interest was the work of LEARNING LINKS in the area of informal adult learning opportunities as this had not been explored elsewhere in relation to collecting information to be stored on electronic databanks (1).

The Council for Educational Technology has, of course, a brief to explore ways of using the new technology for educational purposes. LEARNING LINKS broke new ground in that it was aimed at non-institutional settings and was concerned with informal adult learning, in contrast to the earlier work of the Open Learning Unit which was concerned with Open Learning in institutions and in industry.

Within a short space of time, the CET Open Learning Programme launched two adult education projects, both focussing on adult learning outside educational institutions: LEARNING LINKS with its interest in informal adult learning and PLAILS, an investigation into how public libraries can assist independent adult learners. While the latter was not directly concerned with applications of the new technology, the potential contribution of microcomputers in assisting independent learners was obviously of some relevance to this investigation.

While LEARNING LINKS kept the individual learner firmly in mind, it was also interested in finding ways of extending the role of host agencies. By working in non-educational settings, the project was not only intending to overcome barriers of access for adults but was also exploring ways of involving host agencies in a new educational role. It was always hoped that a LEARNING LINKS service would become an integral part of the host agency's operation. The use of a microcomputer was regarded as a facilitating element in this process.

It should be stressed that LEARNING LINKS was only interested in Information Technology in so far as it could be a useful tool to achieve the other project aims. In particular, microcomputers were regarded as useful where they could primarily serve the needs of clients rather than the needs of staff. That is to say, LEARNING LINKS was not setting out to give staff advanced tools for administration, eg financial or statistical programs, but aimed to acquire or produce software packages which could be used by LEARNING LINKS clients. In the event, some administrative needs were met by word-processing and electronic mail facilities.

Given the slender project funds, it was quite clear from the beginning that software development could only be undertaken if outside funding could be attracted. It was also obvious that, given the time constraints and staffing level, such development would produce prototypes rather than finished commerical products. In other words, the main benefit from any such development would be the thinking and testing attached to applications, pointing the way for future developments of expert systems. This approach was consistent with the need to find potential roles of micros in LEARNING LINKS settings.

For economic reasons, it was desirable to build on equipment which potential developers might already have. In 1983, the most common micro in educational and other organisations was the Acorn BBC B but this on its own was not powerful enough to cater for the kind of software applications envisaged for the LEARNING LINKS project.

It was decided to use a Torch Z80 disc pack as it upgrades the BBC micro by adding a second processor and dual disc drive. It also enables the use of CP/M (a world standard computer operating system). The facilities of this equipment are described in more detail in the next paper.

Costs for the basic configuration of an upgraded BBC, Torch disc pack, monitor, dot matrix printer and a modem were shared between the host agencies and CET. Participation in the project therefore involved initial expenditure for equipment as well as ongoing maintainance costs for each of the sponsoring organisations.

Some software was provided for Centres through project funds. Initially, this amounted to Torch software (word-processing, calculation and filing programs supplied with Z80 disc packs and communications software supplied with the modem). In addition, a Wordstar package was installed in all but one Centre. Programs developed by the project were also made available to Centres.

LEARNING LINKS was fortunate in attracting funds under the DES provision for the unemployed (REPLAN money via the FEU). These made possible the development of an interactive guidance program. In addition, a database program was produced with project funds. Both were written in dBase II and piloting took place in LEARNING LINKS Centres. More details of these programs can be found in Paper TR4.

It should be borne in mind that one could not assume that staff working in LEARNING LINKS Centres would have any knowledge or experience of using computers. In the event, only 2 out of a total of 22 staff involved in LEARNING LINKS work had previous experience of using microcomputers and in both cases this experience was very limited. This was a significant factor in deciding how much experimental work could be carried out by the project and which potential roles of the micro could be tested in LEARNING LINKS Centres.

The other important factor in deciding how to use the microcomputer was the limited time span of the project. Since evaluation rather than long-term implementation was the primary purpose, it was essential to be able to train staff quickly and to ensure adequate piloting and usage of any envisaged software application. As stated earlier, the emphasis was on finding out possible benefits for clients in the future.

In the event, a fairly wide range of applications was used by LEARNING LINKS. These are the subject of Paper TR3. The experiences and reactions of those using these facilities are documented in Paper TR5. The factual details of the hardware and software used are recorded in the next paper.

(1) UDACE reported its findings in April 1986

HARDWARE

As indicated earlier, a number of factors were involved in adopting the chosen configuration (BBC micro, Torch Z80 disc pack, monitor, dot matrix printer and Torch modem). Apart from economic considerations and the advantages of using add-on equipment, rather than self-contained micros with built-in disc drives and modem, there were other important points to consider. It was thought to be essential to use equipment which operated in standard CP/M (the Torch has its own MCP system which is basically the same as CP/M) so that it could run a variety of commercially available software. It was also seen as an advantage to be able to operate the machine as a BBC micro, thus making it possible to use software written for this machine.

Using this configuration, it was possible to improve facilities as funds became available, by substituting a Torch Hard Disc Unit for the Z80 disc pack and by introducing daisy wheel printers and colour monitors. It was recognised that an 8 bit machine would place severe restrictions on software developments but it was thought that the versatility of the Torch equipment would, to some extent, outweigh the inherent disadvantages.

The chosen hardware thus enabled LEARNING LINKS to use a variety of software applications and to test their usefulness in the Centres. The networking facility of the Torch was fully used at the CET offices and proved useful between Centres.

There is no doubt that the chosen hardware also imposed serious constraints on the work. The limited memory of the BBC, together with the lack of speed when using floppy discs, does not make for good software performance. This produced a gap in what people expected from computers and the reality when using inexpensive equipment. This aspect is discussed more fully in a later section.

Serious problems were also experienced with the hardware. During the winter of 1984/85, Torch changed their make of disc drives and improved the design of the disc packs. At that time, we had already purchased a number of disc packs of the old type and were also acquiring the new ones. Alignment problems between drives almost brought software development to a standstill since the operation of the project at that stage relied on being able to service discs in LEARNING LINKS Centres by machines used by the Development Officer and the programmer. With the help of the Torch company, this problem was eventually resolved and, after that, few difficulties were experienced with the hardware.

SOFTWARE

A. Commercially available software used in LEARNING LINKS Centres

Torch Perfect software (Perfect Writer, Perfect Calc, Perfect Filer). This was supplied with the Torch disc packs but was in fact only used by CET staff. LEARNING LINKS staff were not trained in its use as it was not found to be very user-friendly.

Torch communications software (Datel, Torchtel, Torchmail). This was supplied with Torch modems. Some use was made of Torchtel to access Prestel and other viewdata systems. Torchmail was used more and more as the project gained momentum.

Word-processing (Wordstar). This was installed in three Centres and was used extensively.

B. Software developed by the LEARNING LINKS project

In addition to the commercially available software mentioned above, the project looked at the needs of a LEARNING LINKS service and the possibility of new software applications to meet clients' needs.

In early 1984, two areas were identified for development:

1) A database to store information on locally available learning opportunities, including offers and requests to set up learning exchanges. (April 1984 - July 1985)

2) A guidance/self-assessment program which would assist adults in identifying their learning needs. (October 1984 - December 1985)

It was decided to go ahead with the first application from project funds but to postpone the second until outside funds could be secured. Both packages were to be based on the same commercial software so that, eventually, the two programs could be linked. We were, therefore, looking for a powerful and flexible low-cost database package which could serve both developments since there could be no question of producing the software by using one of the powerful languages available for micros, such as Fortran, due to the high development costs involved.

DBase II was chosen and proved to be a powerful and flexible package. It requires a highly skilled programmer to make the most of it. However, as would be expected given the low cost of the software, one has to be prepared for a number of penalties.

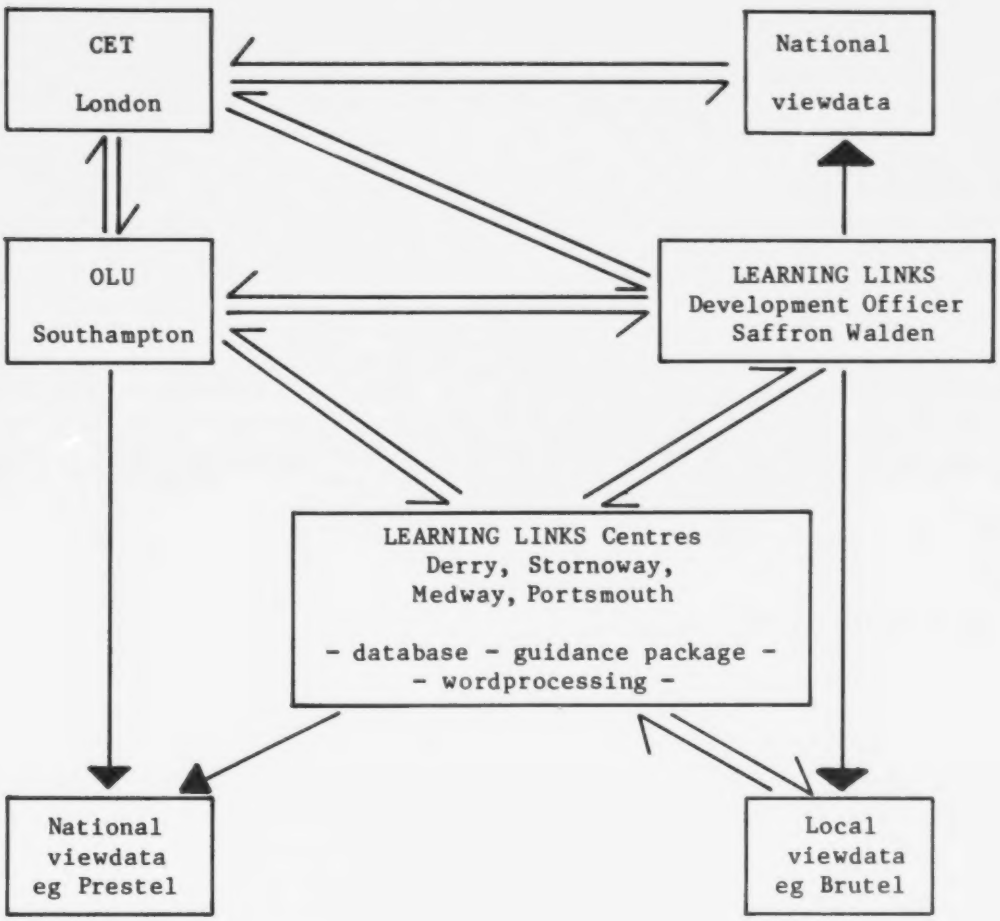
DBase is an interpretative language, translating commands into code before acting upon them. This inevitably slows down programs. In addition, the software offers a maximum of 64 variables, which is very limiting. The lack of bytes per field (maximum of 1,000) makes extra demands on the programmer when handling much larger fields. DBaseII does not interface directly with other languages, thus preventing the use of multiprogramming applications. The restrictions on possible cursor positions make it less user-friendly than other software of a similar kind.

Despite these restrictions, we were able to develop the two prototype programs which are described in Paper TR4. These programs served to explore new approaches in the service of adult learners, to collect information on users' experiences and to extend the role of computer software beyond what is available off-the-shelf only.

The illustration on the next page summarises the ways in which the LEARNING LINKS computer network was used during the project. A fuller description of how the various applications were utilised follows in the next paper.

The LEARNING LINKS computer network

Components: CET, OLU, Office of Development Officer, four LEARNING LINKS Centres



Arrows in one direction indicate accessing databanks

Arrows in both directions indicate

1. Sending of electronic mail
2. Accessing and contributing to databanks

The previous paper listed the hardware and software facilities available to LEARNING LINKS project staff and LEARNING LINKS Centres. The purpose of this paper is to describe how these were used in LEARNING LINKS services. A detailed description of the LEARNING LINKS software can be found in the next paper.

APPLICATIONS OF COMMERCIAL SOFTWARE PACKAGES

Word-processing

This proved a popular application of the microcomputer once staff had learnt to master the Wordstar package.

LEARNING LINKS staff regularly used word-processing for correspondence, producing reports and other documentation. Mailmerge facilities were found to be useful on occasions, especially when circulating agendas and other papers for meetings. However, since the equipment was mainly intended for client use, this application of the micro had to be limited in some instances to certain times of the day or week.

Clients benefited from the facility by receiving newsletters or news sheets. In late 1985, staff were also beginning to set up other files containing information of interest to clients or other agencies. However, on the whole, word-processing tended to be exploited for the benefit of staff rather than clients. Its popularity was partly due to the fact that it enabled even the amateur typist to produce error-free documents.

Electronic mail

This also was a useful facility for LEARNING LINKS Centres, although it proved more difficult to install and to train staff in its use. Hardware requirements became problematic when the telephone line to a LEARNING LINKS Centre was an extension line from a central switchboard. Although Torch did produce a modem designed to operate under such conditions, the result was not totally satisfactory in that the equipment was temperamental and did not offer automatic answering facilities. Faulty wiring of the modem socket by British Telecom caused problems in another Centre.

Torchmail was extremely useful in maintaining the information flow between the Open Learning Unit and the Development Officer (separated by about 250 miles). Being able to receive reports or draft letters within minutes of being typed assisted those who, due to work pressure, produced papers close to deadlines. It also encouraged staff to keep each other informed since the transmission of information required virtually no effort.

Since LEARNING LINKS had to overcome considerable geographical barriers, the use of electronic mail did not only seem to reduce distances but also reinforced the feeling of belonging to a network of information centres. On the whole, Torchmail was confined to sending monthly reports from the Centres to the Development Officer and the Open Learning Unit and to each other. Occasionally, it was used for updating other files. On one occasion, in an emergency when all copies of a local databank disc had been erased by mistake, the whole disc was updated over the telephone, thus restoring the service to its full potential. The process took about one hour. The distance involved

was about 500 miles and the total cost around £10. In the early stages, it was reassuring for staff to know that such an emergency service was possible, even though it was only used once.

During the piloting of the guidance program, Torchmail was also used to incorporate new developments into the program out in the field. It was possible to eradicate 'bugs' by substituting updated files for old ones.

Viewdata

Each Centre was equipped with Viewdata facilities and all staff were trained in the use of Prestel during 1985. Its use was severely restricted, partly because of the high costs involved but also partly because relevant information was rather limited.

With the advent of public access to ECCTIS on Prestel in early 1985, Centres were encouraged to make use of this service. They were also provided with lists of other relevant Prestel pages. Nevertheless, Prestel was only used on the odd occasion, rather than on a regular basis.

One Centre developed an interesting partnership with the Careers Service, where sixth formers could use LEARNING LINKS facilities after hours to help them find out about suitable courses, entry requirements, etc. In return, the Careers Service met all Prestel charges.

The LEARNING LINKS project rented seven Prestel pages to display project information. These resulted in a small trickle of enquiries throughout the duration of the project.

A private Viewdata system in the Outer Hebrides, initially operated on a Torch, was used to alert the community to the LEARNING LINKS facilities. It is intended to find a more central and varied role for this facility as time goes on.

Other Centres also became involved in discussions on local viewdata systems. Late in 1985, two counties were setting up systems and LEARNING LINKS staff looked into ways of making the most of these facilities in the future.

SOFTWARE DEVELOPED BY LEARNING LINKS

Database

This program was developed to serve clients' information needs on locally available learning opportunities and, in particular, to store information on requests for learning and offers to teach, thus enabling client matching by common interests in learning exchanges and groups.

In all Centres, the database was used for this purpose although, due to the later start of the Scottish Centre, this was not fully developed by the time CET involvement ceased.

Each Centre held up to a maximum of six different kinds of information on disc, categorised as follows:

Courses suitable for adult returners - leading to recognised qualifications

Courses suitable for adult returners - non-examination
Clubs, societies, local groups
Home-based learning opportunities, including broadcasts, correspondence courses and other distance learning facilities
Clients' offers and requests
MSC TOPS provision.

Local data stored in the databanks ranged from about 200 records at the Scottish Centre to about 1,300 in the Medway Centre. The home-based learning databank contained about 400 records. Access to this data was, on the whole, staff-mediated although clients were encouraged to use the database themselves.

Staff have found the databank a useful tool, not only to retrieve information but also to stimulate interest in learning. They have used the database as an aid to interviewing and to extend adults' perceptions about possible learning opportunities and about themselves as people. In the LEARNING LINKS setting, where staff are available to assist users, the database serves a useful purpose in achieving the LEARNING LINKS aim of enabling adults to make informed choices about participating in learning activities.

Guidance program

The need for such a package was identified in early 1984, when LEARNING LINKS ideas began to take shape. Its purpose is to stimulate adults, in particular the unemployed, to think about why, how and what they might wish to learn. It is also designed to help people identify their interests and to make them aware of the practical implications of taking up learning. Interests and preferences are analysed and users receive a printout at the end of the program which provides them with information as to how they can set about taking up learning.

This program links directly with the data design format used in the database. It addresses the same questions and uses data contained in the local databanks.

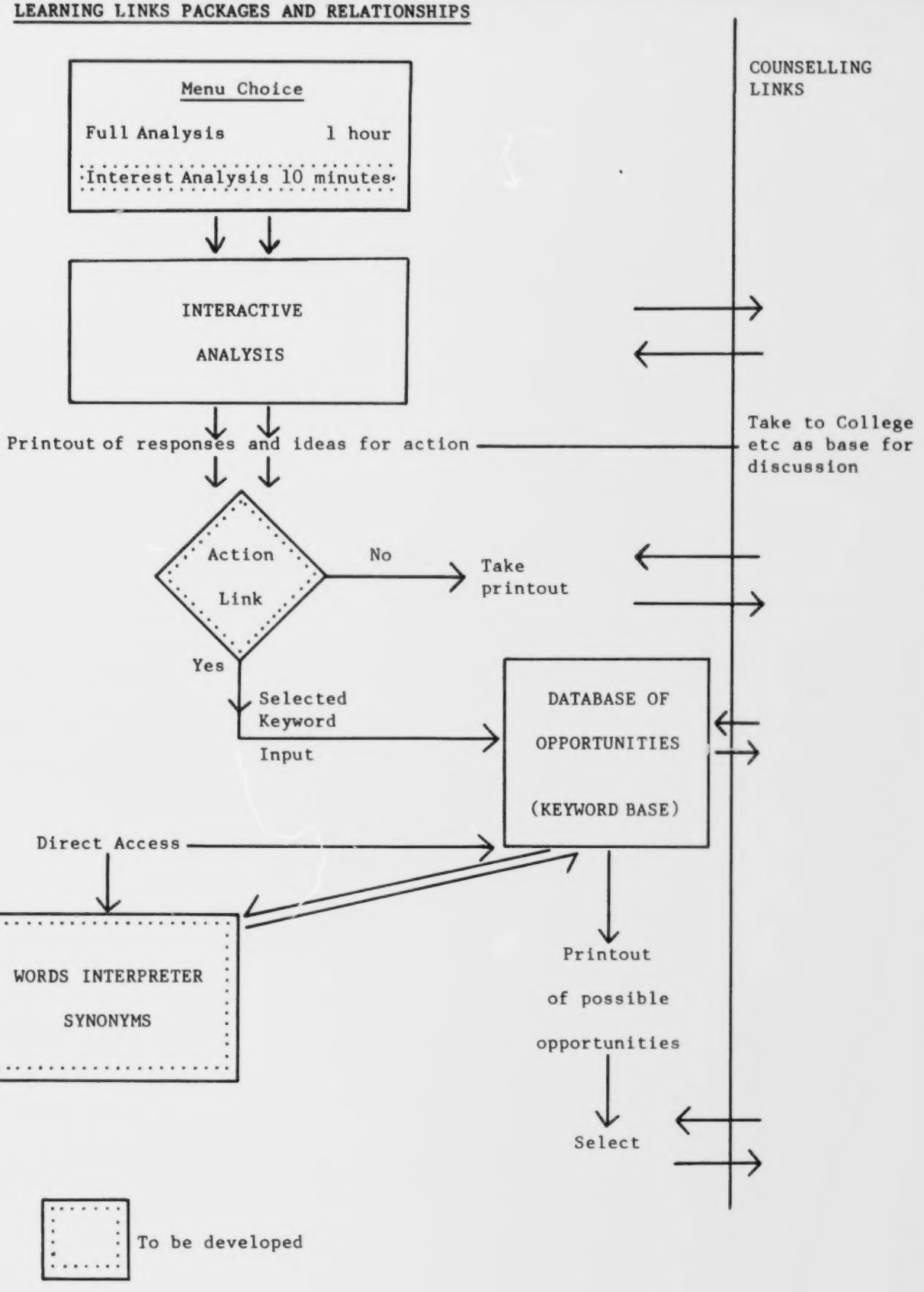
The program was introduced into three LEARNING LINKS Centres during the winter of 1985/6. It is free-standing and does not require staff mediation. Users receive a printout which can serve as a basis for searching the database for relevant information on learning opportunities. It can also be used for a follow-up interview.

Between 80 and 100 clients had used the guidance package by the end of the LEARNING LINKS project in the three LEARNING LINKS Centres where the program was piloted. Where clients experienced problems in operating the software, these were addressed on the revised version of the program.

Due to its length (on average about one hour), it was found to be less well suited for use by occasional/drop-in clients. Apart from this drawback within a LEARNING LINKS Centre setting, staff identified a need to encourage users to recognise that the program was intended for self-assessment, rather than professional expert guidance. On the whole, users did not request a follow-up interview immediately after using the program.

Staff found the program easy to operate, since it only required initial loading, with subsequent automatic reloading after use.

LEARNING LINKS PACKAGES AND RELATIONSHIPS



DESCRIPTION OF LEARNING LINKS SOFTWARE (Paper TR4)

The two programmes described in this paper, while developed as separate units, were part of an overall software design philosophy for the LEARNING LINKS project.

The database, although developed first, represents the second phase of an information access process for users, who would search databanks after having worked through the guidance package. The latter takes a self-assessment approach. It produces the keywords which users will need to search databanks identified as appropriate by the program (eg search for PARENT EDUCATION on the HOME-BASED learning opportunities disc).

Both programs are written in the same language (dBase II), both were produced in Torch format.

The page opposite illustrates the inter-relationship between the two packages. It shows which parts of the overall design exist and those that have to be developed. The illustration also draws attention to the fact that at any stage of the process there may be a need for a human counsellor.

INTERACTIVE GUIDANCE PROGRAM

This software package development was enabled through external funding under an FEU project. Its purpose is to stimulate adults, in particular the unemployed, to think about why, how and what they might wish to learn. It is also designed to help people identify their interests and to make them aware of practical implications in taking up learning. The program was written for a BBC B with Torch Hard Disc Unit in dBase II.

The program has been designed in nine separate sections and is intended as a free-standing facility, to be used independently by adults, including those who have never used a computer before.

The sections are as follows:

1. Introduction and practice routine
2. Reasons for learning
3. Previous learning experiences
4. Ways/modes of learning
5. Interest analysis
6. Interest selection
7. Considering practicalities
8. Research information on users
9. Printout

The program assumes that people can be given useful guidance on their likes/dislikes in relation to why, how and what they wish to learn. It also makes users aware of practical considerations they might have to take into account before taking up learning. It is aimed at adult returners to learning and the printout from the program provides users with a 'learning self-portrait' which reflects their positive responses to parts 2, 3, 4, 6 and 7 of the program (as listed above).

Throughout the program, users' responses are analysed in relation to seven routes for learning. These are:

Informal learning (groups, clubs, etc)
Home-based learning (distance learning, media-based learning, etc)
FE/AE non-examination classes
FE/AE examination courses
Learning exchanges
Higher education
Residential adult education

The final analysis of responses provides the basis for suggestions on how to set about taking up learning, which are included in the printout.

Design specifications

The program was written to the following specifications which were produced by a working party:

a) It should be assumed that the program can be capable of use by an individual without a mediator.

b) Printed instructions are needed on how to use the program and the accompanying literature.

c) A practice program to be built into the program for inexperienced users and an alternative routing for non-novice users.

d) Limited use of keys to avoid confusion, eg numbers for choices, return key to confirm entry.

e) Facility to move backwards and forwards within the program and an option to call up help menu at any time.

f) Facility to delete unwanted or wrong responses/change responses.

g) Customisation facilities for some data files, eg local references to agencies.

h) Program length to be kept to a minimum to avoid loss of concentration, confusion, etc.

i) There should be a minimum of four top level menus which would be compulsory for users:

- Roles/personal characteristics (eg women returners, housebound, etc)
- Past learning experiences
- Aspirations/motivations
- Practicalities which the user would be expected to work through.

Each section would be followed by a summary file.

j) Output for user file would include a summary of the choices made in various categories, to provide the user with a printout and the opportunity to search the relevant databases.

k) Monitoring facility on users including age, sex, reactions to the experience.

Print material

A printed leaflet would need to invite/encourage potential clients to use the program, also outlining the aims and providing a plan of the content.

A back-up board behind the computer set-up would repeat parts of the leaflet by outlining the aims of the program and provide a table of content areas. The board would also provide some basic operational instruction, and assume no prior knowledge of technology on behalf of the user.

Program structure

The program consists of 80 screens, not all of which will be accessed by every user.

Routing of users is governed by

1) The exits they choose
2) The outcomes of the interest analysis
3) The responses they give.

Example 1: User choices

The screen below gives users a choice of exits. Response 1 will route them to screen H1000. Response 2 will take them to screen H0006. Users also have the choice to leave the program (exit 4 takes them to the front page H0002) or to call up the Help Screen H0999.

```
                MENU MANAGEMENT EDIT SCREEN
                ===========================

Help key no. ==>>H0005A


You can now practise using this program, if you would like to.
The computer will help you to succeed.

   To practise              press KEY 2 and press RETURN


If you have used this program before you can go straight to
PART 1.

   To go to PART 1          press KEY 1 then press RETURN

   To leave the program     press KEY X then press RETURN

NK1 H1000A NK2 H0006A NK3 A NK4 H0002A NK5 H0999A TAG1 TAG2
```

Example 2: Analysis routing

The screen below is from the interest analysis section. Depending on users' responses to interest items, they will either be routed to

Screen H4700 - one main area of interest has been found
Screen H4701 - 3 or 4 main areas of interest have been identified
Screen H4800 - no pattern of interests has been established

```
                    MENU MANAGEMENT EDIT SCREEN
                    ===========================

Help key no. ==## H4620A

Here are some more activities you might be interested in.

                                        For YES   KEY 1
                                        For NO    KEY 0

Are you interested in:

  1.  Model making                                  => 1
  2.  Ship building                                 => 0
  3.  Chemistry                                     => 1
  4.  Learning a foreign language                   => 0
  5.  Social work                                   => 0
  6.  Trade union law                               => 0
  7.  Ballet                                        => 1
  8.  Home maintenance                              => 0
  9.  Outer space and the planets                   => 1
 10.  Reading poems                                 => 0
 11.  Management studies                            => 1


NK1 H4700A NK2 H4701A NK3 H4800A NK4 H0002A NK5 H0999A TAG1 TAG2
```

This screen still offers the option to leave the program (exit 4: H0002) or to call up the Help Screen (exit 5: H0999).

Example 3: Tagged screens*

The screen below includes two toggled screen routes.

If a user indicates that s/he is unemployed (Response 1), screen H6400 will become part of her/his route and will also be included in the printout. Equally, if someone indicates that s/he is not sure about having the necessary entry requirements (Response 2), screen H6700 will be included, giving information on mature entry.

MENU MANAGEMENT EDIT SCREEN

Help key no. ==>>H6100A

PRACTICALITIES

Here is a list of factors which can affect people who wish to learn. A second list will follow on the next screen. Please respond as before.

For YES	KEY 1
For NO	KEY 0
If you are not sure	KEY 2

TIME

Do you have dependents to look after?	=> 1	
Do you have to collect children from school?	=> 0	
Are you unemployed?	=> 1	**(T1)**
Are you free during the daytime?	=> 1	

GETTING BACK TO LEARNING

Would you like further guidance?	=> 1	
Will you have the necessary entry requirements?	=> 2	**(T2)**

NK1 **H6200A** NK2 A NK3 A NK4 **H0002A** NK5 **H0999A** TAG1 **H6400** TAG2 **H6700**
*

Note: * A tagged screen is introduced into the program route at a point which is indicated by its address, eg H6400 will come after H6300 and before H7000. It will not appear immediately after the above screen (H6100).

During the program the system can reach over 2,000 decision-making points, thus leading each user through a unique analysis pattern.

Flowcharts of the program (in 8 sections) can be found in Appendix 1.

Program facilities

The menu below takes users into the following facilities:

LEARNING LINKS MENU

1 - Build screens

2 - Edit screens

3 - not operational

4 - Drive the program

5 - not operational

6 - Display/print master screen file

Q - Quit

Please make your choice, then press RETURN ==>>:

Option 1 is used to build new screens by entering a new screen address, eg H1234. Screen text and exit addresses, including toggled screen addresses, can then be entered on to an empty proforma screen.

Option 2 allows editing of existing screens (text and exit addresses). Screens are called up by their screen address, eg H0002.

In this way, screen text can be customised, eg by including local addresses and telephone numbers of contact persons.

Option 4 sets up the program for client use.

Option 6 prints out all screens, either on paper or by listing them on the VDU.

Other facilities

Interest items used in the interest analysis can be edited by using a separate editor (command file: LLSC10A1.CMD). However, the interest file requires sorting before it can be re-installed into the program.

Printout (a sample is included in Appendix 4)

This is produced automatically at the end of the program. It consists of a summary of responses from parts 2, 3, 4, 5 and 6. It also includes suitable routes for taking up learning, in descending order of priority.

Updating of program

With the exception of a few hard-coded screens (top screen, free text entry screen and printout screen), all text can be edited. This is particularly useful where local data is involved, eg when a telephone number has changed.

Printed materials

A copy of the user leaflet is included in Appendix 3. Three posters are also used as a backup board to assist users. A manual for staff has also been compiled.

Transferability of program application

The LEARNING LINKS guidance program was designed for a specific purpose. However, the design philosophy and the adaptability of the software in terms of screen content and screen routing make this program potentially useful in an unlimited number of contexts. The program does not have to include the analysis section but could be used as an authoring language for writing a wide range of different applications.

Copyright

All copyrights of the program belong to the FEU. A separate report on the FEU funded project is also available. This includes recommendations for further enhancement of the software.

DATABASE

This program was written in dBase II in Torch format and was designed to run on two floppy discs. It was later converted to operate on one surface of a hard disc. In the original version, all command files are held on the A Drive, all data files are on the B Drive.

As indicated in Papers TR2 and TR3, the development of this program was undertaken to serve adults' information needs about learning opportunities. Requirements for this purpose were specifically related to:

a) Flexible user-orientated access of data
b) Flexible layout of data to incorporate anything from formal courses to client data
c) The possibility of adjusting layout and user access in the light of piloting experiences.

To achieve a) and b) it was decided to build up databanks by using client language, both for presenting data on the screen and for accessing data.

Below is an example of how data was presented, both on the screen and on the printout:

******** information on file matching keyword(s) entered *********

Code	P186A
What	Art Club, learn from each other, no tuition as such
Where	Trafalgar Place Community Centre, Fratton
Who can join	Any adult member of Association
When	Monday 6.30-9.30 pm
How long	3 hours per session
How often	Weekly
Who to contact	Peggy Canty, tel. 730128
Organisation	Fratton Community Association
Facilities	R,H Record entry date 25/09/84

Search keys: ART CLUB FRATTON
MONDAY EVENING
1 Record(s) so far found with KEYWORD match - Index no. : 154

==========

Each record has a unique code (P186A) which is made up of the following components:

P	for Portsmouth (location of databank)
186	record number as documented on the paper document relating to this record
A	for Art, code letter for main keyword (subject/interest).

All records have 11 fields each with a specific field length (see appendix for sample of document showing field lengths). The first 10 fields contain the main factual information about an activity, while the KEYWORD field is used to enter keywords which are indexed by the system and which are used for searching.

Keywords (or index words) repeat the key information contained in a record. The maximum length for any one keyword is 18 characters. The keyword field has 100 characters. Keywords are entered in the following manner:

ART: CLUB: FRATTON: MONDAY: EVENING: etc.

The above illustrates the keyword field for the record at the top of the page.

Data entry and data structure

Data is initially recorded on a document form (see Appendix 6 for sample form). It is entered on the computer exactly as it is shown on these forms. Data can be entered in small or large batches, although the latter are more economical for this system.

Below is an illustration of the data entry screen:

```
              CET DATABASE INPUT SCREEN  -  BATCH
              ***********************************

          Code                ( Enter "END" to exit data entry)

          What
         Where
  Who is it for
          When
      How long
      How often
       How much                      Move CURSOR to bottom
    Facilities                     for data entry to file
  Who to contact
   Organisation

       Key words
```

All new data is stored in a temporary file on the A Drive. Processing of data can be carried out immediately after inputting or it can be delayed. During processing the data is separated into four separate files as follows:

1) Document code and data from fields 1 to 10 into main datafile on the B Drive.

2) Data from field 11 into keyword datafile on B Drive.

3) Indexed keywords into valid keyword file on B Drive.

4) All keywords into master keyword file on A Drive. (This is not used by the system but was included for research purposes.)

Capacity

Each floppy data disc will accept about 500 records. (The capacity was never fully tested since maximum record number on any one disc has so far been below 500.)

Databanks of more than 500 records can be built up by using as many separate discs as required. These can be interchanged at the search point, ie still within the dBase environment.

Search modes

1) For client use, search by keyword is used. Below is a short keyword list. This list relates to one specific datadisc only and was obtained by printing out keywords compiled on that disc. Users choose up to 6 keywords (although in practice 2 or 3 are sufficient and frequently only one keyword is used).

```
LISTING OF CET DATABASE KEYWORDS  (B DRIVE)  PAGE  1
```

ANTI-NUCLEAR
BANJO
BEGINNERS
BODHRIN
CHESS
CND
DAY
DISABLED DRIVERS
GUITAR
HANDICAPPED
INSTRUMENTS
MANDOLIN
MUSIC
OFFER
PROBLEMS
REQUEST
SPANISH
TIN WHISTLE

Total number of unique KEYWORDS on this "b" disc 18

Keywords are entered into the keyword search screen as illustrated below:

```
                CET DATABASE SEARCH BY KEYWORDS
                *******************************

 To find information on locally available learning activities:


Select your keywords from one of the printed lists and enter
these in the spaces below.  You can search on one or more
keywords.  Make sure you are searching on the disc which matches
your list.
Keywords describe .....
              WHAT you wish to learn
              WHEN you wish to learn
              HOW you wish to learn


ENTER KEYWORD 1 ART                          press RETURN
              2 CLUB                         press RETURN
              3 FRATTON                      press RETURN
              4 MONDAY                       press RETURN
              5 EVENING                      press RETURN
              6                                     press RETURN


To go back to the main search menu, bring the cursor to the right
of the arrow by pressing RETURN, then type END.

                   ===>>                            press RETURN
```

The above example would find the record included on page 1 since the keywords are contained in the keyword field of this record.

Search process by keywords:

The system validates the keywords, ie it checks that all keywords relate to the disc in use. If an invalid keyword has been entered, this is stored in the invalid keyword file before users are made aware that it is not contained in the keyword list of the datadisc they are using.

2) Other search modes are for servicing purposes only.

```
                    CET SEARCH MENU
                    ***************

          1 - SEARCH BY VALID KEYWORDS

          2 - SEARCH BY NUMERIC INDEX NUMBERS (VERY FAST)

          3 - SEARCH BY KEYWORD SUBSTRINGS (NOTE: WILL BE A
              SLOW PROCESS)

          4 - SEARCH BY DOCUMENT CODE (VERY FAST)

          5 -

          6 -

          Q - QUIT


          Please make your choice =>:
```

Search by document code is very quick, while substring searching is for emergency use only as it is very slow. Search by index numbers proved impractical due to the way dBase re-indexes records after deletion and subsequent packing of data.

Data maintenance

Updating:

The updating program locates records by their codes. With the exception of the code itself, all data can be edited.

Deletion of data:

This is a very quick initial task as records can be deleted by their codes. However, datadiscs have to be re-indexed after this process in order to get rid of old data and old keywords.

Other program facilities

Main menu

The menu screen below illustrates the main facilities:

```
                CET MASTER CONTROL MENU
                ***********************

                1 - DATA ENTRY OPTION 1 - BATCH

                2 - not operational

                3 - SEARCH OPTIONS

                4 - PRINT OPTIONS

                5 - MASTER FILE INSTALLATION

                6 - UTILITY OPTIONS (BAND INDEXING ETC)

                7 - not operational

                8 - EDIT AND UPDATE MASTER FILE

                Q - QUIT

                Please make your choice => :
```

Option 1 has already been described under data entry.

Option 2 was intended as a quick single record entry facility.

Option 3 takes users to the search screen (see above).

Option 4 includes all print facilities (these are described below).

Option 5 sets up all necessary files on a formatted B Drive disc (this option is protected by a password).

Option 6 carries out indexing of data.

Option 7 was intended to be developed for synonym chaining of keywords, eg for senior citizen read OAP or for karate read martial arts, etc.

Option 8 is described above under data maintenance.

Print options

These offer the following facilities:

```
                    CET PRINT MENU
                    **************

          1 - PRINT KEYWORDS ON "B" DRIVE

          2 - PRINT KEYWORDS ON "A" DRIVE
              (MASTER KEYWORD FILE)

          3 - LIST ALL UTILITY PRINT OPTION

          4 - FREQUENCY ACCESS PRINTOUT

          5 - INVALID KEYWORDS

          6 -

          7 -

          Q - QUIT

          Please make your choice =>:
```

Option 1 prints in alphabetical order all keywords from the data disc (B Drive).

Option 2 prints keywords in alphabetical order from the master keyword file (A Drive).

Option 3 lists on screen all data files (first A Drive, then 3 from B Drive).

Option 4 prints out the frequency of record use (see appendix for sample printout).

Option 5 lists on screen invalid keywords relating to the data disc.

Additional processing of data

In order to speed up searching, data of a similar kind should be located close together, eg all martial arts or all craft activities. Since the record code indicates the type of data contained in a record, this was used to bring together related data by carrying out alphabetical sorting of data by code letter, eg all martial arts activities will be found under the letter M (this also includes mathematics and others), while all craft activities will be coded under C. Searching will therefore be confined to records carrying this code letter, thus reducing the data to be searched.

After alphabetical sorting, the data has to be re-indexed. In the example above, the keyword Karate might have a bottom index of 168 and a top index of 181 while, before file sorting, these could have been 101 and 498 respectively. The band width has therefore been reduced leaving a total of 13 records to be searched.

These processes are necessary because of the position conscious nature of dBase II. They overcome some of the shortcomings of the software and make for more effective searching.

Client use of database

Clients do not access data via the main menu illustrated earlier since this would involve unnecessary complications and risks. They arrive at the keyword entry screen via the following menu (floppy disc version):

```
1 - Search by keywords

Q - Quit

Please make your choice, then press RETURN ==>>
```

On the hard disc version, an interim screen appears after the screen above, asking users to select the type of data they wish to search:

```
                LEARNING LINKS CHOICE MENU
          ************************************

                1 - Informal learning activities

                2 - Home-based learning

                3 - Learning offers and requests

                4 - Non-examination classes

                5 - Examination courses

                6 -

                7 -

                8 -

                9 -

               10 -

                Q - To quit

          Please make your choice then press RETURN == >>
```

Items on this screen depend on the databanks in use and can be customised. Each item represents the equivalent of one floppy disc and databanks are likely to contain about 500 records each. The system can therefore cope with up to 5,000 records.

Both the above screens take users directly to the keyword entry screen as illustrated on a previous page.

The database copyright is owned by CET. A manual for staff use has been produced.

Previous papers described applications of the microcomputer in the LEARNING LINKS project. As stated in the introduction, these were regarded as a means of enhancing LEARNING LINKS services and as a way of assisting clients to identify and reach their learning goals.

While the emphasis was on the end user, it is important to document not only their reactions and expectations but also our experience of working with staff for whom this represented a new departure in their work with adults. In particular, their training needs and the ways in which they exploited the facilities will be of interest to those intending to become involved in using the new technology for and with adults.

Information Technology and LEARNING LINKS sponsors

The fact that LEARNING LINKS was intending to use microcomputers in its Centres was, on the whole, an attraction to would-be sponsors. There was much interest in getting into the Information Technology field amongst people working in adult education, in the library service and in other settings. By and large, those sponsoring LEARNING LINKS services had little or no experience of using computers but felt that the LEARNING LINKS project might provide a good opportunity to set out on the IT road. Only the Scottish Centre was fortunate enough to benefit from other IT developments already under way in its community; the other Centres, at least in the initial stages, relied almost totally on ideas and practical help from LEARNING LINKS project staff. Some sponsors and staff displayed a healthy scepticism of IT innovations, while others had hopes that computers would answer some of their current work problems, especially where these related to the provision of information.

Information Technology and information providers

During 1985, when LEARNING LINKS Centres were actively collecting information on learning opportunities, the Data Protection Act was under preparation. It did not come into effect until May 1986, by which time the national LEARNING LINKS developments had been completed.

When gathering information, the confidentiality of computerised information was not an issue on the whole, ie there did not appear to be any major barrier to obtaining information for a computer databank. However, one Centre did find that the principal of a local adult education centre was not happy about having tutors' telephone numbers included so that enquirers could contact them direct, although this information had been supplied by the tutors themselves. As a result, only the telephone number of the adult education centre was included.

In another instance, in Scotland one agency felt that it was not organised enough to have information about its activities included on the databank. This does suggest that computer databanks convey a highly professionalised image which may be a barrier, especially when working in the area of informal adult learning.

Information Technology and LEARNING LINKS staff

On the whole, staff had high and, in many ways, unrealistic expectations of microcomputers. In particular, they over-estimated the storage capacity of

micros and expected more speed from machines which were equipped with floppy disc drives. On the other hand, they under-estimated the training needs to acquire computer skills by not allowing enough time for practising these after training sessions had been carried out, although it must be recognised that this was often due to work pressure. As for other forms of learning, regular use of newly acquired skills is essential and this was found to be especially true in relation to computer skills.

Details of the kind of training provided follow later. For the moment, let us investigate more fully the other training needs required to achieve the maximum impact of LEARNING LINKS computer applications. Each Centre was equipped with the same facilities (as described in the previous papers) but the use of these varied considerably. This variation was directly linked to staff attitudes to the actual hardware and software and to staff awareness in exploiting the potential of these facilities. During the course of the project, the emphasis on training therefore shifted from skills training, which was an essential pre-requisite, to raising staff awareness of how to use programs felxibly rather than mechanically. Some staff adopted flexible approaches quite naturally and, indeed, developed ways of using the system which had not been explored in training sessions. Others, despite repeated attempts to broaden their view of what the system could do, retained a purely instrumental view, ie regarded the database merely as an electronic filing cabinet without utilising its potential for extending clients perceptions of possible learning opportunities. It is interesting to note that such attitudes have no direct relationship with staff expertise in using the system. In fact, one member of staff, whilst still struggling with operating the database, took a totally client-centred approach and was able to involve clients in using the computer effectively from the very beginning.

This highlights another example of staff/client usage of the computer. In some instances, the computer facilities seemed to have remained the property of staff, giving them a sense of more expertise, raised status and increased professional standing. Since LEARNING LINKS, however, was about breaking down the division between learner/tutor and enquirer/adviser, this was an undesirable outcome and, in all cases, facilities were made directly available to clients. It is important to recognise that such facilities as electronic databanks to some extent remove traditional staff status because people are no longer regarded as the expert source of information. Similarly, the guidance package was intended to put the computer in the role of counsellor/advisor, thus potentially reducing the importance of LEARNING LINKS staff. In fact, the guidance package posed less of a threat since it was introduced at a time when staff were already much more aware of the possible benefits of using the new technology with clients. However, the psychological effect on staff and the change of role imposed by computer applications should not be under-estimated. Some staff adjusted fairly easily to the role of facilitator and mediator while others found this quite difficult.

Staff training

Nearly all staff experienced initial computer fright. This could be observed quite clearly in the way they pulled back their chairs and were reluctant to get their hands on the equipment. On the whole, this fear was overcome once a program had been successully used and by giving them opportunities to practise skills under supervision. In most cases, it took several training sessions before staff felt happy to use equipment on their own. The fear of perhaps damaging the computer or erasing data by mistake was a real barrier to independent use in the early stages. The fact that, for most staff, help was

only available at a distance proved to be an obstacle and added more pressure at a time when they were trying to find their way in working out a number of new concepts and techniques.

Initial training needs included handling of equipment, finding the right sockets for the many and varied leads and understanding the basic fact that a computer will only produce what programs (in our case on floppy discs) provide. An understanding of the wide variety of applications and a basic grasp of how these are possible (database, word-processing, electronic mail, Prestel, learning to type, etc) was aimed at. Specific skills included looking at the directory of a disc and identifying its content, executing commands such as formatting discs, copying discs, etc. The purpose and use of read/write stickers as well as basic instructions for handling floppy discs had to be covered. An understanding of dual disc drives and their use together with the skill of changing an OA> prompt to an OB> prompt and vice versa were gained over time.

As the Torch disc packs frequently produced certain errors, some of the common problems such as range errors also had to be covered and staff were given strategies for handling such situations. The fact that some Centres experienced considerable difficulties with equipment, anything from misaligned drives to total failure, was a real setback for the project. Sorting out hardware problems not only used up many frustrating hours but also seriously undermined staff confidence and morale. Staff become very reluctant to use equipment with the public as they felt rather exposed when things went wrong and they were unsure of how to overcome the problem. Unreliability of equipment together with bugs in new software applications took some of the steam out of the enthusiasm for using computers.

As indicated earlier, staff varied in their determination to acquire essential skills. On the whole, staff who joined the project in 1985 were quicker and more determined to succeed in using the different applications than those involved in the earlier development. This no doubt reflects the shifts in attitude of project staff as well as the fact that computer applications had become an integral part of operating the project by that stage. However, the contribution made by staff to developing appropriate applications of the new technology for LEARNING LINKS work and the effort and personal cost involved must not be underestimated. Without their commitment, the usefulness of this aspect of the LEARNING LINKS project would have been substantially diminished.

Reinforcement of initial training tended to be provided over the telephone and distance teaching in the use of Torchmail and other applications became a regular feature of the project.

In general, little use was made of the hardware and software manuals. With a few exceptions, these were not easy to use, mainly because the language was inappropriate and too much was assumed. Commercial lessons on disc for Wordstar were found to be useful, despite their unimaginative and repetitive style.

Since LEARNING LINKS staff were chosen for their ability to relate to people, to create a client-centred service and to evaluate their work through the eyes of potential adult learners, it is not surprising that they responded better to face to face or telephone tuition than to jargon-filled manuals. Even when instructions were written up in everyday language, staff did not always refer to them but preferred to be talked through the task in hand. It is also understandable that staff preferences lay in interacting with people rather than spending hours on servicing databanks.

However, they were gradually able to adapt from being providers to become enablers and were happy to use the microcomputer to this end. The more people-centred staff found the more exciting roles for the new technology, whilst those more in tune with traditional systems had a tendency to use these facilities in a more limited and more staff-centred way. For most staff there was, however, a direct relationship between computer confidence and a willingness to experiment with new approaches. Where technical problems were encountered, all project staff experienced a real sense of inadequacy and frustration. (See Appendix 8 for an example of a training schedule.)

Information Technology and LEARNING LINKS clients

During the early 1980s, public access to microcomputers was fairly limited for adults. Most children and young people were gaining experience of using micros in schools but, for adults, this was less common. The advent of cheap micros meant that many people had acquired computers for the home. Despite this, the majority of adults had not become familiar with using a computer keyboard or knowing much about applications which could be of benefit to them. Those who did have some computer experience, eg with the BBC micro, did not necessarily appreciate the differences involved with operating with a second processor, eg the Torch Z80. They would also not realise the potential and contraints of the software in use, eg dBase II.

Developments on the home computer market and the introduction of computerised systems in many commercial settings did, however, bring about a change in the attitude of the adult population to computers, reducing the fear element of using the new technology (as documented in the Leicester experiment of ISLA and DEVIL). By 1985, a microcomputer in a corner of a Job Centre or in a public library therefore attracted the curiosity of adults and was more likely to promote enquiries rather than put people off. The fact that staff were available to assist no doubt encouraged greater use of these facilities, even when a program was designed for independent use, eg the guidance package.

Apart from the novelty value of the system as a whole, staff found that the live screen, displaying information of interest to adults, attracted people's attention and stimulated their interest. Clients' expectations of what a micro could do for them varied but as with early staff expectations, they were inclined to regard the equipment as being able to perform in a similar way to mainframe computers with regard to speed and capacity.

The databank proved useful in a variety of ways. When introducing clients to the set of five discs, representing different learning opportunities, they became aware of something which normally remains hidden. By being able to handle a disc containing information on home-based learning opportunities or local clubs and societies, this category of information was made concrete for them and subsequent searches provided illustrations of learning activities they might not have considered before. Similarly, by looking at other people's offers to teach, they were able to recognise the value not only of the skills on offer but also their own existing knowledge and skills which had often been acquired through experience rather than study.

Printouts of keywords provided clients with hundreds of examples of possible learning activities, all available in their home location. This information not only encouraged them to identify their own interests but also prompted a range of questions which enabled easy and meaningful interaction between enquirers and staff. Thus the database, despite its technical limitations, proved useful for information retrieval and as a tool for interviewing.

In LEARNING LINKS work, the neutrality of the computer, be it for information provision or guidance, as well as the confidentiality of the interaction, overcame some of the problems associated with human interaction. A computer treats everyone the same and is non-judgemental, or at least, if there is any bias in the program, this remains consistent. Computers are also more thorough than humans, as they relentlessly carry on searching for specified information while staff and enquirer might be satisfied once they have found a few examples of suitable data.

Experience with the guidance program suggested that clients found it useful to work through the various parts of the program, encouraging them to think about different aspects of learning. Research evidence from piloting (1) indicated that they were helped by considering reasons for, and modes of, learning. They also responded well to looking at interests and to being made aware of practical considerations.

There is little evidence to suggest that clients followed up their experience with the self-assessment program by using the printout for interviews at a later stage. This was partly due to the short time available for piloting the program which did not allow for systematic user follow-up activities.

There is evidence that clients' expectations were less in line with a self-assessment approach and more geared towards a more dependent form of guidance where an expert (or expert system) carries out a diagnosis and provides very specific guidance.

The program enabled users to become familiar with the computer through a practice program. Adults were able to use this program independently, even if they had never used a computer before. The program engaged them for almost an hour. This meant that adults had the opportunity of using the new technology for themselves in a meaningful way for a reasonable length of time, an experience which is still not widely available to many adults.

Viewdata facilities were used by enquirers when their learning aspirations required searches of the ECCTIS or COIC databank. However, this was an occasional rather than a regular use of the new technology for reasons described earlier. In theory, the information contained on Prestel could be of great value to informal adult learning, as it represents so many different interests. In practice, the economics of the system and the high skills needed to find specific information make it difficult to exploit this facility fully.

When adults have been successful in using computer applications, a remarkable shift in attitudes takes place and their sense of achievement is noticeable. It is, therefore, vitally important that systems intended for public access for adults should either be so simple as to be totally foolproof or should include some practice facilities which will give adults this sense of achievement before engaging them in searches or other operations. For many adults, it is also important to know that there is somebody there who might be able to help them if they want assistance. The onus, however, is on software developers to design systems fit for people. The public should not be expected to learn complex computer access skills. There is much room for improvement in order to demystify the computer and provide simple access to its facilities for the present adult generation.

(1) The program includes a research section which asks users to indicate what they found useful in the program.

The task of the LEARNING LINKS project was to identify appropriate roles for the new technology, in particular the microcomputer, in an information service for adult learners. The conclusions from this work can be found at the end of this paper.

In the process of experimenting with different roles, as described in Paper TR3, project staff had to take a number of decisions about suitable hardware and software. Many lessons have been learnt through this work but it would be unwise to present these here in specific terms as the field is changing rapidly.

For example, equipment which was regarded as innovative and advanced in 1984 was found to be outdated two years later, eg the BBC B was a best seller in 1984 while 1986 saw the arrival of the Acorn Master series - no longer limited to 8 bit machines and including turbo boosters and RAM discs. The same is true of software developments with dBase II being overtaken by dBase III in 1985.

However, while these components of the new technology change, the questions for potential developers remain the same. The answers will vary and will depend on the state of the art at any given time. One outcome from the LEARNING LINKS project therefore is a checklist of questions about the use of microcomputers, about local databanks and about computerised guidance systems. Some answers based on the LEARNING LINKS experience are included where these do not relate to specific hardware or software.

HARDWARE

The computer world of 1986 includes a vast range of equipment: micros, minis and mainframe computers. There are freestanding micros, networks of micros and micros acting as terminals for mini or mainframe computers. Questions regarding the choice of any of these are not only related to cost but, more importantly, to the purpose for which they are to be used.

Below is a first checklist of questions.

If the answer is YES to some or all of the following questions, a freestanding micro (preferably with networking and terminal facilities) might serve better than a mini or mainframe to which access may be more limited (eg you can use other people's programs but not create your own tailor-made database):

- Do you wish to create your own programs?
- Do you need specialised applications?
- Do you require very localised applications?
- Do you wish to experiment with programs and different computer applications?
- Do you want diversity of application?
- Do you wish to use software 'off the shelf'?
- Do you have access to expertise for staff training?
- Do you have access to expertise for maintenance of equipment?
- Do you wish to use the equipment in different locations?

The reverse is obviously also true, ie one would not use a micro if single-purpose use of a computer is required, if no expert help is available for novices or if applications are fairly general. Also, applications requiring large memory capacity and high speeds would not be suitable for many micros,

although this is likely to change in the near future. In addition, self-contained systems are labour intensive, require good back-up support and tend to outdate quickly.

The advantages of freestanding systems are that they are not host-dependent in respect of software, faults in the host computer or the computer link, and access, eg access speed varies depending on how many users are accessing a host machine at any one time.

If one disregards the questions relating to the purposes of the envisaged software applications, the following could be used as a 'rule of thumb' for making a first decision about the suitability of a micro:

How many users will the system have to serve at any one time?

Number of users	Hardware
one user	a micro
a few users	a networked micro or a mini
more than 4 users	a mini
a large number of users	a mainframe

Questions on choice of micro:

1. What software is available?
2. What support is available?
3. What is the capacity of the processor?
4. What is the memory capacity?
5. Can the micro be expanded (eg BBC B plus Torch units)?
6. Is it suitable for multi-program applications (eg concurrent CP/M)?
7. Is there any objective written evidence on performance and applications which could inform one's choice?

It should be remembered that, while the computer is a one-off purchase for which costs can be estimated fairly accurately, this does not apply to the software, be it off-the-shelf or tailor-made. Prices vary considerably and it is likely that, in the end, more will have been spent on software than hardware, especially if a diversity of applications is required.

SOFTWARE

LEARNING LINKS developed two tailor-made software packages, a database and a guidance program (see Paper TR4). Questions on software choice and design are therefore limited to these applications.

Database

Questions relate to the design and to the performance level of systems. Some pointers on design of information for adult learners have already been included in Paper TR5.

The LEARNING LINKS experience has been that hard choices have to be made and that an awareness of trade-offs is essential, eg it was decided that flexibility of accessing information was more important in the LEARNING LINKS context than information retrieval speed.

Below, then, are basic questions which have to be addressed. They are not limited to applications of microcomputers only, although some have arisen because micros were being used.

A. Questions about the information which had implications for designing the database

1. What is the database supposed to do?

    a) Serve the public and/or serve management?
    b) Provide specific/general information?
    c) Prepare clients for information?
    d) Stimulate interest in information?
    e) Service management needs?
    f) Serve different subsets of people?

2. What type of information is required?

3. What information is available?

4. What level of information is required: public, semi-public, private?

5. How many records will the database include?

6. What classification system will be suitable?

7. How compatible are classification systems/use of thesaurus with client language?

8. Can information be presented in a user-friendly way?

9. Who will be servicing the database: collection and maintenance of data?

10. How can the system be left open to respond to changes in clientele and society?

11. Does the database software allow quick restructuring of files to a new format in response to clients' identified needs?

12. Does the database use an easy to learn, flexible programming language to enable quick changes to the way the data is accessed?

B. Questions on user access to information

1. Who will use the database: clients/staff?

2. Will usage be occasional/regular, casual/for a special purpose?

3. How often will the system be used?

4. In what location will access be made available?

5. What competence will people need to use the system?

C. Questions on how to monitor usage/users

1. What feedback do you want?

   a) Information usage?
   b) People using the information?
   c) Problems encountered?
   d) Unsatisfied information needs?

2. How can the system monitor a) to d) above?

3. For what purpose do you want feedback?

4. Who has access to monitored data?

D. General questions on database development

1. How much money can you spend?

2. What are your priorities if you have to limit your choice?

3. Can you link your database to other databases?

4. What language/commercial software will be used to set up the database?

5. Is there written evidence of a similar system from which you could learn?

Summary of pointers for choosing/designing a database for adult learners

1. Purpose.

2. Users' needs.

3. Technical facilities.

Guidance program

It is more difficult to be very specific in setting out questions in relation to adult guidance programs since these will vary considerably depending on the purpose for which the system is designed.

The following are key questions which had to be answered during the development of the LEARNING LINKS system. Questions relating to choice of hardware and software are not included since the answers were predetermined in this case, ie both had to be identical to those used for the database, in order to enable possible future linking of the two systems. The parameters for the hardware and software are also likely to be subject to rapid change in the near future and are therefore of transitory interest.

A. Questions relating to the purpose of an interactive system

1. Who is it aimed at (eg adults returning to learning)?

2. What can the program do for the target group (eg provide career guidance or motivation to learn)?

3. Does the outcome have to be specific or can it be general (eg one specific course or a range of options)?

4. Will the system provide an expert opinion or will it enable users to assess themselves?

5. Can the system be directly linked to relevant databases?

B. Questions relating to client-centredness of a guidance program

1. How can users be made aware of what the program is for?

2. How can users be made aware of what the program contains (eg database used for interest analysis)?

3. How can users be encouraged to be themselves (eg by disagreeing with an analysis)?

4. How can users include their own information if this is not part of the database in use (eg by entering their own interests)?

5. How can the system open doors for users, rather than streamline their choices (eg by including options relating to formal and informal learning)?

C. Questions relating to client use

1. Who is likely to use the system - how can the target group be reached?

2. When and where will the program be offered?

3. Is it for single/repeated use by one person?

4. Is it used on a casual/purposive basis?

D. Questions relating to monitoring of program use

1. What feedback is required and for what purpose?

   a) On people using the program?
   b) On problems encountered?
   c) On appropriateness of output?
   d) On appropriateness of databases within the program?

2. Who has access to feedback information and for what purpose?

   Access:
   a) Program developers?
   b) Client?
   c) General public (eg published report)?

   Purpose:
   a) For improving the program?
   b) To compile user statistics?
   c) To evaluate cost effectiveness?
   d) To obtain information for future developments, etc?

E. Questions relating to performance and technical requirements

1. What is the size of the program (eg 80 possible screens)?

2. What is the appropriate length of the program (this relates to casual/purposive use)?

3. How important is speed?

4. How much technical competence is required?

5. Can the program be customised for local/specific requirements?

6. Can the program be converted to run on a range of equipment?

Summary of pointers for developing a guidance system

1. Philosophy: expert guidance/client self-assessment.

2. Desired practical outcomes.

3. Target groups.

4. Technical facilities.

As for the database, trade-offs have to be considered, eg ease of client use versus simplicity in coding, or length versus range of options to be explored by the user. It is likely that, within the next five years, computer developments for adult learners will take place in response to the UDACE recommendations. These are likely to include databases and guidance systems (one of the latter, CACGS, is already under way). LEARNING LINKS has investigated how such systems can be made client-centred by experimenting with applications on a microcomputer. Developers should take into consideration the questions above, especially those relating to the clients themselves, in order to arrive at systems suitable for those adult learners who find it difficult to associate with formal education.

CONCLUSIONS ON THE ROLE OF THE MICROCOMPUTER FOR LEARNING LINKS

Experience from the LEARNING LINKS project suggests that the microcomputer can assist in a number of different ways.

Roles identified by LEARNING LINKS for the microcomputer

Information source:	Database (LEARNING LINKS and other packages, eg SCET OL) Viewdata Word-processing
For adult guidance:	LEARNING LINKS program
Communicator:	Electronic mail Viewdata (response frames)
For office duties:	Word-processing Financial programs, etc.

Potential roles of the microcomputer for LEARNING LINKS type work
(in order of relative importance)

a) Databases

Given appropriate hardware and further developments in the client-centred approach to information access, it would be possible to enable independent client use of these. The UDACE Technology Group investigated this aspect in some detail and put forward recommendations to this end. Information on informal adult learning should form part of the overall information provision for adults.

b) Self-assessment/guidance programs

The LEARNING LINKS guidance program at present links with the database via printed information. It would be possible to develop this or a similar system further to facilitate an electronic link so that databanks would be searched automatically for relevant information.

c) Networking of microcomputers

The networking of micros and appropriate software for this use could be more fully explored, eg for holding data on a central host computer which could be accessed by micros in the field. The main constraint, apart from the lack of suitable software, is the cost of the public telephone system.

d) Viewdata

Information on Prestel is too limited and too expensive at the present time. Much of the educational information is provider-orientated rather than client-centred. Much of it also relates to the formal education system. Gateway charges, as are envisaged for ECCTIS, will prove another barrier for client use.

There is, at present, little expertise in making the most of local viewdata for adult learners. This area needs to be investigated as such systems could provide extensive and cheap information to a large number of people.

e) Word-processing

This could be more fully exploited to serve community needs, individually and on an inter-agency basis.

f) Administrative packages

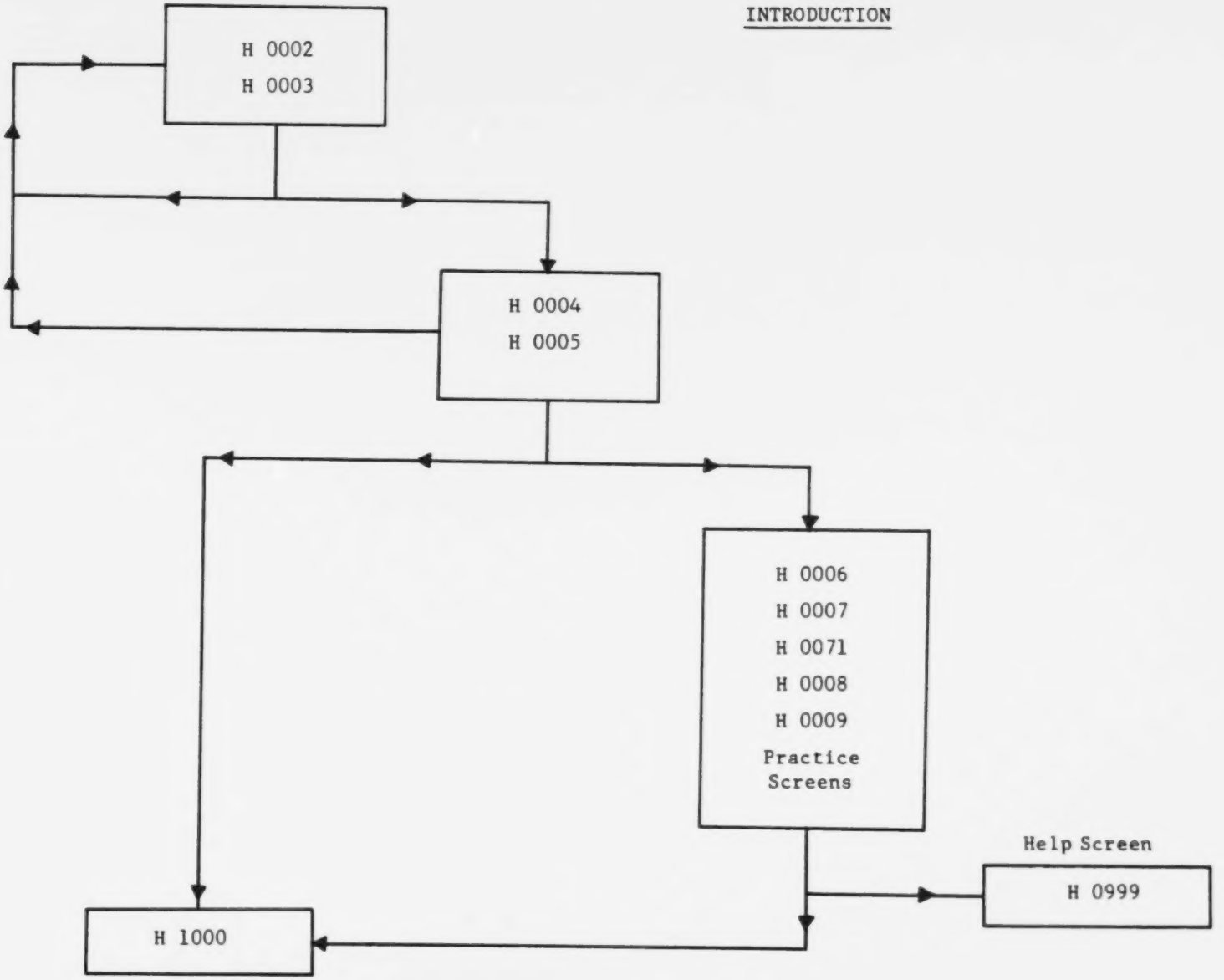
These could provide staff with additional facilities but would require thorough training and good software support.

The microcomputer has played an important part in LEARNING LINKS developments. A number of useful roles for the new technology, especially in relation to future development needs, have been identified.

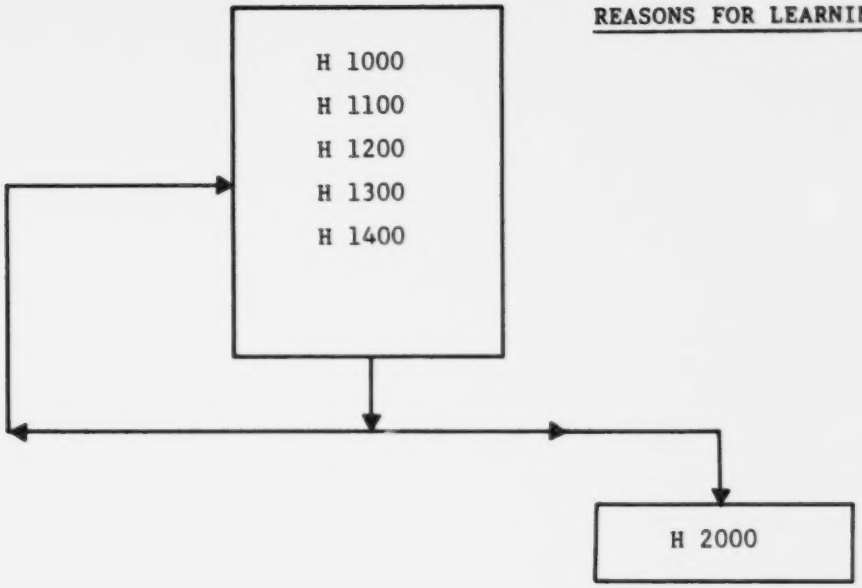
Given adequate staff training and support in the early stages of using any of the above, microcomputers could be more fully utilised in LEARNING LINKS type services than has been possible during the two year trial period of this project. It is, however, important to remember that some of the above applications are not totally client-centred and should, therefore, be regarded as of secondary importance.

GLOSSARY

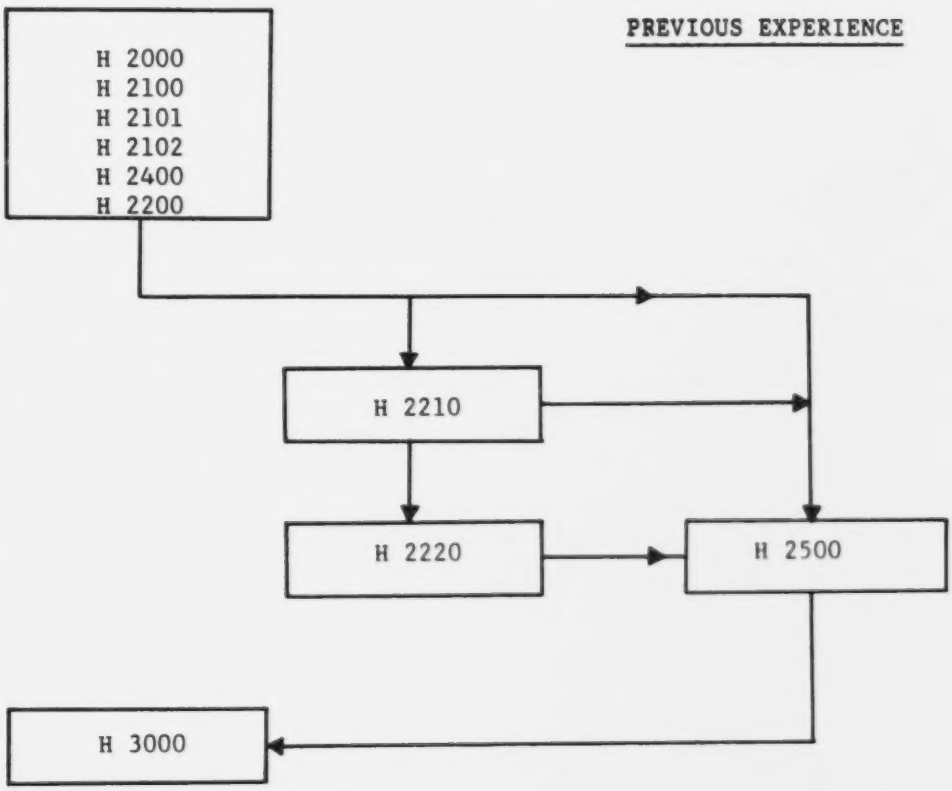
CACGS	Computer Assisted Careers Guidance System
CET	Council for Educational Technology
DES	Department of Education and Science
DEVIL	Diary of Events in Leicester
ECCTIS	Educational Counselling and Credit Transfer Service
FEU	Further Education Unit
ISLA	Information System for the Leicester Area
OL	Open Learning
PLAILS	Public Libraries and Adult Independent Learners, a CET project
REPLAN	An initiative by the DES for the unemployed
SCET	Scottish Council for Educational Technology
UDACE	Unit for the Development of Adult Continuing Education
VDU	Visual Display Unit

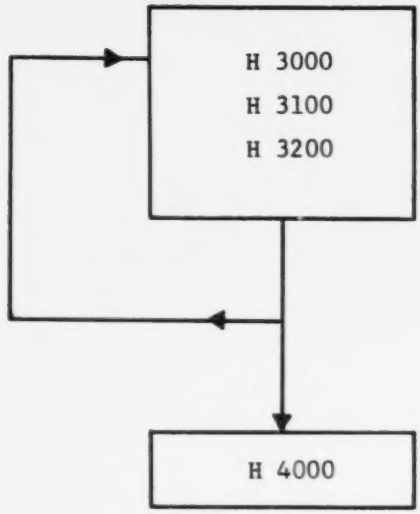

H 0002
H 0003
H 0004
H 0005
H 0006
H 0007
H 0071
H 0008
H 0009
Practice
Screens
Help Screen
H 0999
H 1000

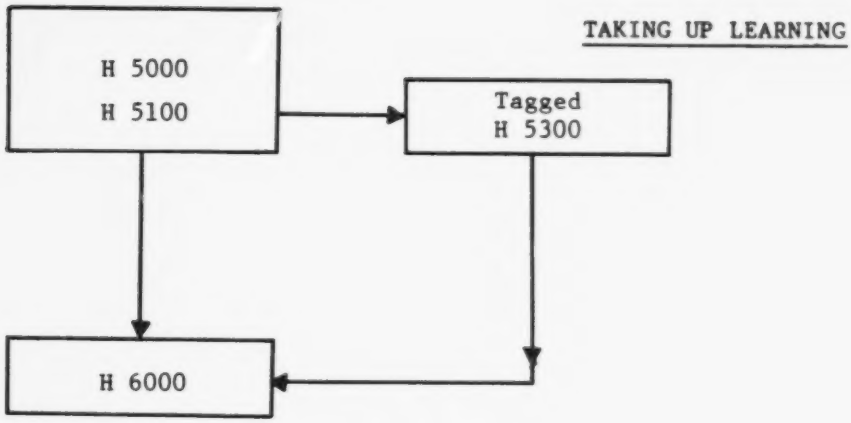
REASONS FOR LEARNING

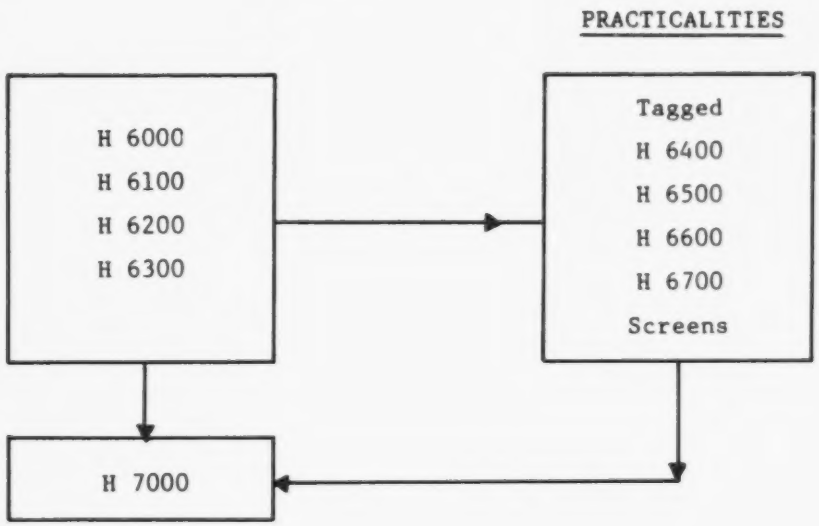


PREVIOUS EXPERIENCE




WAYS OF LEARNING
H 3000
H 3100
H 3200
H 4000


TAKING UP LEARNING
H 5000
H 5100
Tagged
H 5300
H 6000


PRACTICALITIES
H 6000
H 6100
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H 6300
Tagged
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H 6500
H 6600
H 6700
Screens
H 7000

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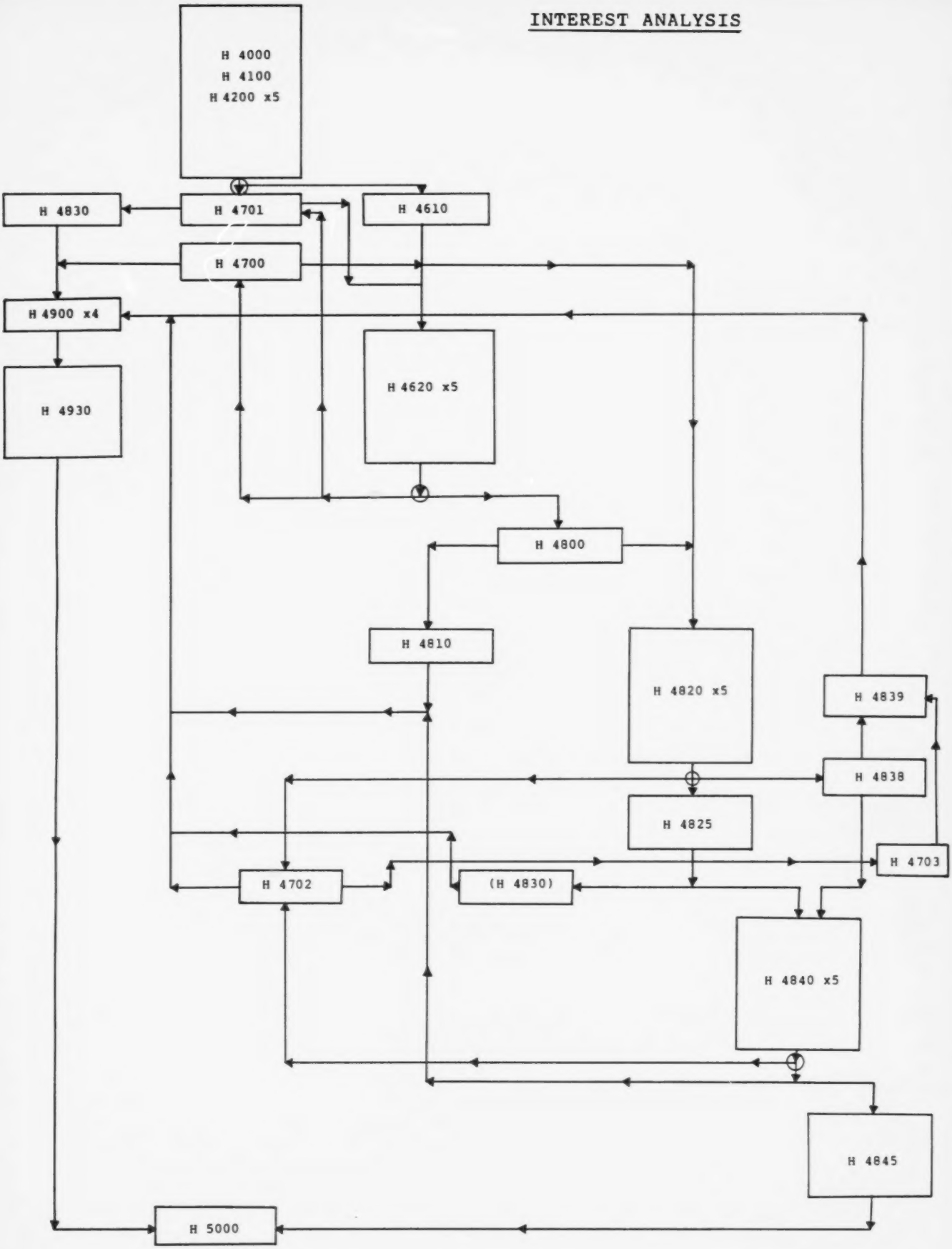
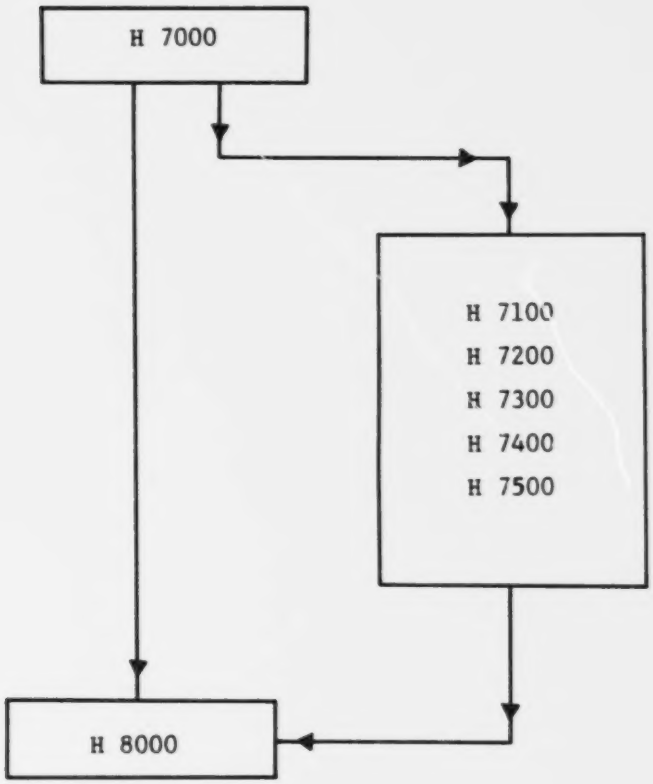
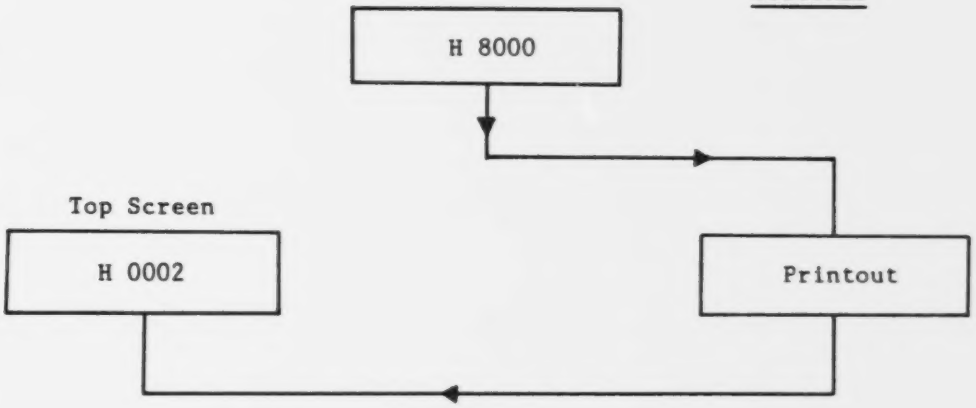
INTEREST ANALYSIS



RESEARCH INFORMATION



OUTCOMES



APPENDIX 2 - DESIGN PHILOSOPHY AND METHODOLOGY

A design philosophy and methodology that gives a large element of freedom from 'hard coded' introductory text, help messages, menu text and menu inter-relationships must be adopted in order to achieve the following:

- The rapid development of an overall software framework before the detailed 'flesh' has been fully developed and decided upon. This framework being largely independent and free from textual and detailed menu content.

- To have a high degree of freedom and flexibility of screen content, etc even after the guidance system becomes operational.

- To develop a range of 'system management' packages that will be placed above the operational system.

  In outline these will be as follows:

  * System introduction 'Management' sub-system.

  * Help screen 'Management' sub-system.

  * Menu built 'Management' sub-system(s).

  * Menu inter-relationship 'Management' sub-systems.

  * Menu route and route trace-back 'Management' sub-systems.

  * Menu route log 'Management' sub-system.

  For each of these sub-systems master files of text, menu data, menu relationship data and general parameters to be created and maintained with dBase2 programs.

System Introduction 'Management' Sub-system

This gives the facility of creating system introduction screens of up to approximately 950 characters per screen. The text records would have entered a unique index number for reference and a calling address (that would be the index number of the next introduction text to follow). In this way, the number of text screens for this function will be completely open-ended. It is envisaged that the introductory screens would contain pictorial information that can be built up from standard screen characters.

The ability to scroll back to previous screens would be available. Screen edit facilities would exist.

Help Screen 'Management' Sub-system

This would allow the creation and editing of all help screens, that would be to a maximum of 950 characters. Each screen would be referenced by an index number and would have a chaining index to a further screen if so desired.

Help screen could also be nested to at least one level.

Menu 'Management' Sub-systems

The menu 'Management' sub-system will allow the creation and editing of menu screens by the design users. The resultant generated screens would have, for example, five lines of heading information as determined, not by the software writer, but the design team. Again, the body of the menu could, for example, be six items, entered and available at any time for change without reference to the operational menu driving program. Category information could be entered against each of the menu elements as required.

Any help screens previously defined for a specific menu could be called by entering the menu index number.

Dependent on the type of menu, either a single call to the next menu could be entered or, if the next menu to be called is determined by the end user's response, multiple next menu addresses (index numbers) would be entered.

Facilities for the entry of text sub-headings would exist.

Menu Relationship 'Management' and Menu Relationship Analysis Sub-systems

In some situations, it may be necessary to determine the next menu on a non-chained basis but still not within the menu driven software. In this case, a file of 'From' and 'To' screen relationships by index number would be created and maintained.

As can be seen, the system design users will be creating a fairly complex network of relationships between menus, etc. In order to manage this network, it is envisaged that analysis tools should be available.

Menu Route and Route Trace-back 'Management' Sub-system

As the system allows the final 'End User' to be able to move in a recap mode, back through the menu system, it is proposed to support this activity with a file of trace-back parameters. This system will create and maintain this file.

Menu Route Log 'Management' Sub-system

This will give the facility to determine, external to the 'End User' program, the parameters to be used for monitoring the use of the system by the 'End Users'.

APPENDIX 3 - USER LEAFLET

LEARNING LINKS SELF ASSESSMENT PROGRAM

This program is EASY to use! It will start with an introduction and will finish by giving you your own printout. This will help you choose things to learn suited to YOUR needs.

There are six main parts to the program:

1. Practice in using the computer.
2. Possible reasons for learning.
3. Your learning experiences.
4. Possible ways of learning.
5. Your interests.
6. Practicalities for you to consider.

PRACTICAL TIPS

* If someone left the program before the end ....

  Press key X then press the RETURN key. Do this for all the spaces on the screen you are working on. The 'Welcome to LEARNING LINKS' will then appear on the screen.

* All your responses should be made by typing a number or a letter followed by RETURN.

* There will be a delay between one screen and the next while the computer searches for the part of the program you have asked for. It may make a noise while it is searching but this is nothing to worry about.

* If you are not sure what to do next, call up the HELP screen by pressing key 9 followed by RETURN. Do this for all the spaces on the screen you are working on.

  Or, if you need help, ask a member of staff to assist you.

PLEASE DO NOT SMOKE OR DRINK NEAR THE EQUIPMENT

Reasons for learning:

You have responded positively to the following reasons for learning.

to learn new skills

to meet people

to become involved in the community

to obtain a qualification

to get out of the house

to get better at doing something

because you enjoy learning

to be able to help others

for other reasons

Previous experience:

You have indicated that you have experienced the following

found your way about in another town
planned a special family event
grown flowers, fruit, or vegetables
discussed your children's education with a teacher
learnt to drive
been a member of a team/group/gang
kept records of your spending
repaired furniture or other household items
written a job application
helped children with reading
attended a trade union meeting
helped an elderly person with practical tasks
filled in forms for official use
worked out the cost of food items by weight
planned a holiday

YOUR QUALIFICATIONS:

You have stated that you have obtained the following qualification(s) since leaving school.

A Levels/ Highers
Vocational qualifications (City & Guilds,RSA,etc)
Professional qualifications below degree level

MORE QUALIFICATIONS:

You have indicated that you wish to obtain the following qualification(s).

BTEC, City and Guilds, National Certificate

WAYS OF LEARNING:

You have shown an interest in the following ways of learning

studying on a short residential course
attending a residential adult college
joining an informal learning group
learning within your place of work
taking part in a learning exchange

YOUR INTERESTS FOR LEARNING:

You have indicated that you wish to pursue the following interests as learning activities

PLAYING THE OBOE
PSYCHOLOGY
Dialects
Welsh
Practising a language you know
Counselling
Music
Origin and meaning of words
Bilingualism
Dancing
Cultivating an allotment

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Information on grants and bursaries for adults (This page will be printed out)

Adults returning to study may be eligible for grants. These are usually available for certain full-time courses. Details of grants can be obtained from your local education authority.

There are two types of grants:

a) Mandatory grants for:
- University awards
- Teacher training grants
- Residential adult colleges

b) Discretionary grants for:
- Further education awards
- Minor awards (including O Level and A Level courses)

Your local library may also have a directory of grant making trusts which sometimes provide funds for adults returning to study. Concessions may be available if you are retired or receiving benefit.

Information on entry requirements for adults (This page will be printed out)

There are many learning activities anyone can join regardless of qualifications. In a self-help learning group the members themselves decide what and how they want to learn. The same is true of learning exchanges and many community groups.

However some colleges and higher education institutions may ask for specific entry requirements, many will make special arrangements for mature students.

Adults should always enquire about special arrangements for mature student entry even if the brochure or prospectus does not mention this. Entry sometimes depends on a successful interview or on an 'Access' course (a bridging course for adults).

PRACTICAL CONSIDERATIONS:

You wish to consider the following practicalities before taking up learning:

- Will you have the necessary entry requirements
- Will it be hard to pay for transport
- Will you find it difficult to pay for books or tools
- Will you find it difficult to pay for fees
- Are you eligible for a grant or bursary

WHAT TO DO NEXT:

You should consider.....

.....contacting the National Institute of Adult Continuing Education (NIACE) or
the Scottish Institute of Adult and Continuing Education (SIACE)

Address: NIACE: 19b de Montfort Street, Leicester, LE1 7GE

Telephone number: 0533 551451

Address: SIACE: 30 Rutland Square, Edinburgh, EH1 2BW
Telephone number: 031 229 0331

****

You might also consider.....

..... contacting your local adult education service.

Address:

Telephone number :
Contact person:

****

.....contacting your local college.

Address:

Telephone number:
Contact person:

****

END OF PRINTOUT

HOPE YOU FIND THIS USEFUL

APPENDIX 5 - SOFTWARE WRITER'S PERSPECTIVE ON THE DEVELOPMENT

THE INTERACTIVE GUIDANCE SYSTEM

Key Lessons to be Learnt

Throughout the development of the interactive guidance system, a number of key witnesses became manifest in hardware and software performance.

Firstly, dealing with hardware. The lack of initial adequate disc capacity and slow access speed of floppy discs contributed to an initial lack of performance of the system and to a protraction of initial development. A lack of adequate RAM storage coupled with language limitations also in no small way contributed to the lack of performance of the system.

Secondly, dealing with software. The interpretive nature of the dBase II language, particularly when high CPU activity parts of the program were needed to be processed, in many ways also contributed to the lack of performance of the system.

Another contributory factor to performance has been the very high amount of program overlaying which takes place within dBase II in relation to disc input/output activities. As the nature of the interactive guidance system is highly disc orientated and IO oriented, the constant process of the program having to go away, overlay the necessary IO routines, carry out the IO activity and then return to its normal operation, has also contributed considerably to the slow performance of the system.

Program routines, particularly the overall menu driving software, also had to be extremely complex in order to cater for the fact that dBase II does not allow many files to be open at the same time. In the case of the interactive system, there is a necessity, in fact, to have something in the region of 15-20 files open, in order to allow for a more simple approach within the design of the system. This was achieved in dBase II by constantly activating and de-activating many levels of primary and secondary files. Again, this in no small way contributed to development time and to the general complexity of the menu driving software.

The limitation of 64 memory variables was hopelessly inadequate for this application. dBase II has no program data dimension capability, nor a capability for storage of a large amount of data within RAM storage. As a result of the lack of memory variables, as stated above, memory variables had to be constantly stored away to disc to small memory files, then de-activated and subsequently re-activated when required. This was another contributory factor to poor performance and program complexity.

The limitations of string handling capability of dBase II, and dBase III for that matter, in many ways deterred or prevented fast development and again led to many complex and, in some ways cumbersome, procedures in order to give the required performance needed for such a system. Even so, despite many clever methods and techniques which were revised again and again, the overall screen presentation system still leaves certain things to be desired. For example, on a screen every response has to be entered down to the bottom of the screen as far as the final response, before any program analysis can take place. This, in fact, is a considerable limitation.

Having said what we haven't had or what the system didn't have in terms of hardware and software, let us look at what the system would ideally require.

Firstly, the system needs access to vast integral Winchester disc storage, at least 5 megabytes and probably 10 megabytes. The difference in cost between 5 and 10 megabytes is so marginal that one would go for a 10 megabyte system. In addition, one 5¼ inch floppy drive would be required for the interchange of data and programs.

In terms of RAM storage, that is random access storage, it is estimated that at least 512k should be considered for the further development of this sytem. This would allow for up to 100 screens (of a size, say, 75 characters by 25 lines) to be stored internally, loaded into the RAM area for storage and accessed from that point as opposed to being called from the Winchester disc. An alternative approach would be to use a RAM disc simulation where the main RAM area of the machine would look like a floppy, or part of a floppy or a Winchester, but would have access speeds probably 100 times faster than that which would be achievable from either Winchester storage or from floppy disc storage. The storage of all menus into RAM storage would take something over 200k. Allowing for programs, other variables, etc and the operating system, 512k would therefore be a realistic figure. Less could probably be used but again the difference in the cost of 256k and 512k is so small that the larger would be the best option.

Looking at the program language and the database system to be used, in my view, the best approach would be to have a database management system away from the actual program language system. dBase II, in fact, incorporates a database management system and a program language system. This is a compromise; however, dBase II does have many good points in terms of the application that we are dealing with, the interactive guidance system. Nevertheless, the compromise imposes considerable constraints on the overall performance of the system.

The type of approach that could be taken would be for the database system to be something like the Superfile 16, or another of a number of proprietary pure database management systems for micros. The natural application program and sub-programs should be written in a compiled language such as C Basic which will give much higher performance runtime. Good interfaces would have to exist between the languages and the chosen database system, eg between C Basic and Superfile 16. This type of interface does exist.

When written in dBase II, this application extensively used substitution macro facility. This facility in effect does not exist in dBase III, ie it does not exist within 'do loops' and the thought of attempting such a task in dBase III without a macro substitution facility would be daunting. Another point relating to dBase III is that it does have 128 memory variables and does have colour presentation capabilities. In addition, quite a number of files can be open at any one time. But the underlying problems of interpretation and execution points, as opposed to execution of compiled code, screen limitation and over-lay limitations (although far less in dBase III than dBase II) are a constraining factor.

The best approach is to take the speed of a specialised file management system together with the speed of an interpretative language system which has the capability of building large memory of rays for the storage of variables, screens or whatever else is needed, on a massive scale within large amounts of RAM memory provided within the hardware. In any further development system the file management should be emphasised. The present menu build system and edit system could still be used and run in dBase II. The outputs, the screens which already exist, can in fact be taken, translated and used in a file management system of the type described above. This would present no great technical

problem and would obviously have the advantage of these aspects of the system not needing to be re-written.

Further Points of Guidance

Mainline hardware should be used, not edge of the string. For example, IBM type or IBM look-alike equipment should be used because, in terms of software and hardware availability, there is much more about.

In terms of the RAM storage and all the associated hardware requirements, IBM look-alike type equipment, or equipment that in fact operates under MS or PC Doss, is much better value for money than almost any other equipment available.

Finally, and this is the most salient point of all, the equipment and software and all other related things should be chosen to suit the application. The application should not be tailored, pressed, pushed or in any way made subordinate to the equipment already available or chosen. It is of paramount importance that equipment is chosen to match this application.

This conclusion has been arrived at in the light of years of experience in the development of computer systems and in recognition of the limitations of dBase II and of the BBC 'B', the limitations of the Torch disc pack and all other aspects of the equipment being used.

Nevertheless, many lessons have been learnt, many techniques have been developed along lines which can be put to much greater effect if applied on appropriate hardware, given correct software and data management system, and most importantly if written in an appropriate language.

K M McGrath
March 1986

APPENDIX 6 - DOCUMENT FORM

Instructions: Please complete within the spaces given, leaving one space between each word. Punctuation requires a separate space. Use only commonly known abbreviations. Do not leave spaces at the end of a line.

	CODE (for office use)	M123A
Description of activity, incl. qualifications (if any)	WHAT	PAINTING AND DRAWING
Place of study/meeting place	WHERE	GREEN SCHOOL, 1 FIRST AVENUE, GILLINGHAM
Target group, entry restrictions (if any)	WHO IS IT FOR	ANYONE
Day, time, starting date	WHEN	THURSDAY 7p.m. from 8 JANUARY
Hours/weeks/terms/years	HOW LONG	2 hours
Full-time/part-time, frequency of meetings/study	HOW OFTEN	Weekly
Cost per session/course/ other costs, concessions (C)	HOW MUCH	£12.50 per term
Creche (Cr), refreshments (R), handicapped facilities (H)	FACILITIES	R
Name, address, tel. no. of person who can assist learner	CONTACT	Mrs. Jones, Green School, Tel. Medway 12345
Agency/people responsible for activity	ORGANISATION	Kent County Council, Adult Education Dept.
Main identifiers for activity, subject, pt/ft, day, time of day, level, location, target group, type or mode	KEY WORDS	ART: PAINTING: DRAWING: THURSDAY: EVENING: GILLINGHAM:

APPENDIX 7 - FREQUENCY PRINTOUT

	NO. REFERENCES	WHAT
P1H	2	Contact Support Group for Parents of Handicapped Children
P159M	2	Portsmouth and District Magic Circle
P429N	2	Training Courses in practical countryside skills, habitat, ecology and management
P430N	2	Practical Countryside Conservation Work including skills, training
P12DA	1	Scrabble, word competition
P168C	1	Civil Service Retirement Fellowship Club
P524C	1	ADVICE SESSIONS
P162D	1	Drama Portsmouth Centre Players
P464D	1	DRAMA (TOWNSWOMEN'S GUILD)
P534D	1	DISABLED CRAFT CLUB - OVER 16s
P63E	1	All Saint's Over 60s Club for the elderly
P183F	1	Portsmouth Fanciers Society, Fur and Feather, Cage Birds
P59H	1	Griffin Club for ESN, supervised sport facilities, use of computer, disco
P163H	1	Self help group stress reduction
P459M	1	CHORAL TRAINING (TOWNWOMEN'S GUILD)
P155M	1	KINGSTON SINGERS
P160M	1	PORTSMOUTH BAROQUE CHOIR
P145M	1	CO-OPERATIVE LADIES CHOIR
P523M	1	MUSIC LOVERS CLUB
P460S	1	SOCIAL STUDIES (LYNDHURST TOWNSWOMEN'S GUILD)
P368U	1	Action Line for the unemployed
P378Y	1	Off the record - youth counselling service
P440Y	1	Griffin Youth Club - Remedial Club

APPENDIX 8 - LEARNING LINKS STAFF TRAINING SCHEDULE

Record of computer skills training provided for four library staff at the Stornoway LEARNING LINKS Centre

First visit: February 1985

Initial introduction to the database facility
Hands-on trials of searching by 4 library staff

Time: including discussions of possible applications and future strategies - 2½ hours
Result: reduction of computer fright

Second visit: April 1985 (only 3 staff available)

Individual and joint sessions:
Torch commands (DIR, DUP)
Use of escape and break keys
Disc management
Formatting of discs
Backing up discs, labelling and recycling discs
Database: searching
printing keywords
checking data
dBase II command to quit
Torch errors (track errors, range errors) and strategies for coping

Time: total of about 7 hours
Result (as documented on evaluation forms by 3 staff): confidence in disc management and data retrieval; being prepared for possible problems

Third visit: June 1985

Individual sessions only:
Revision of earlier skills
2 staff introduced to editing data and all print options
1 staff: information retrieval (absent at April sessions)
1 staff: data and disc management

Time: about 4 hours
Result: as a team, staff could cope with information retrieval, editing and servicing the databanks.

Prior to the fourth visit in September 1985, local staff had introduced the senior member of the library staff to the use of the modem and how to access Prestel.

Fourth visit: September 1985

Individual sessions only:
Problem-solving activities for revision
Extending skills of 2 staff to enable local inputting of data and deletion of records
An introductionto Prestel for 3 staff and discussions on other computer applications, eg word-processing, electronic mail, etc

Time: 3 hours
Result: confidence and self-sufficiency

Training provided for one member of Stornoway staff at residential training in October 1985

Revision of editing and inputting skills
Processing data
Systematic use of keywords
Alphabetical sorting of data files
Band indexing of data

Time: 1 hour

Fifth visit: January 1986

No additional staff training on use of database was needed
Technical backup for processing of data (sorting and indexing) and servicing of guidance program was arranged (not involving the library staff)
Staff were introduced to a number of new facilities, including use of a hard disc unit and automatic loading of programs
Use of Prestel and local viewdata had been mastered prior to visit

Time (computer skills only): 2 hours

The approach above reflects the decision of the LEARNING LINKS Development Officer to train a team in which members complemented each other rather than to aim at all staff reaching the same level of computer competence.